PROFIT EFFICIENCY AMONG ISLAMIC BANKS IN MALAYSIA

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ABSTRACT

The sustainability of banking system depends on the profit efficiency of banking system. Profit efficiency of Islamic banks in Malaysia shows a fluctuating trend from the period of 2012 to 2016. The purpose of this study is to analyse the post Global Financing Crises (GFC) period and to examine the impact of external and internal factors on the profit efficiency of Islamic banks in Malaysia covering the period 2012 to 2016. In this study profit efficiency is measured using net income (NI). Secondary data was used from 16 Islamic banks in Malaysia for Observation 80. There are two external factors which are Gross Domestic Product (GDP) and Inflation (INF) and five internal factors which are Loan Growth (LGROW), Impaired Financing (IF), Loan Loss Provision (LLP), Net Interest Margin (NIM) and Staff Efficiency (STAFFX) tested in this study. This study used panel data analysis to analyse the data obtained from Fitch Connect Database. The study found that, factors like INF and STAFFX have negative significant impact on NI while NIM have a positive and significant impact on NI of Islamic banks in Malaysia. The other four factors which are GDP, LGROW, LLP and IF are found to be insignificant towards NI of Islamic banks in Malaysia. This study is beneficial for researches as guidance in making a good research. On the other hand, it is also important for the Islamic banks management team, investors as well as depositors for the purpose of gaining a greater understanding on the performance of the banks.

Keywords: profit efficiency, Islamic banks, external and internal factors

ABSTRAK

Kemampanan sistem perbankan bergantung kepada kecekapan keuntungan sesuatu sistem perbankan itu. Kecekapan keuntungan bank-bank Islam di Malaysia menunjukkan corak turun naik dari tempoh 2012 hingga 2016. Tujuan kajian ini dijalankan adalah menganalisis tempoh waktu selepas krisis kewangan global serta untuk untuk mengkaji kesan faktor luaran dan faktor dalaman ke atas kecekapan keuntungan bank-bank Islam di Malaysia meliputi tahun 2012 hingga 2016. Kecekapan keuntungan dalam kajian ini diukur menggunakan pendapatan bersih (NI). Data sekunder telah digunakan daripada 16 bank-bank Islam di Malaysia (80 pemerhatian). Faktor luaran yang digunakan untuk diuji didalam kajian ini adalah keluaran dalaman kasar (GDP) dan inflasi (INF), dan lima factor dalam yang telah digunakan didalam kajian ini adalah pertumbuhan pinjaman (LGROW), pembiayaan terjejas (IF), peruntukan kerugian pinjaman (LLP), kadar faedah bersih (NIM) dan kecekapan kakitangan (STAFFX). Kajian ini menggunakan data panel untuk menganalisiskan data yang diperoleh daripada Database Fitch Connect. Hasil kajian mendapati bahawa faktor seperti Inflasi (INF) dan kecekapan kakitangan (STAFFX) menunjukkan kesan negatif dan signifikan terhadap pendapatan bersih (NI) sementara kadar faedah bersih (NIM) menunjukkan hasil positif dan signifikan terhadap pendapatan bersih (NI) bank-bank Islam di Malaysia. Selain itu, faktor-faktor seperti GDP, LGROW, LLP dan IF didapati mempunyai kesan yang tidak signifikan terhadap NI bank-bank Islam di Malaysia. Kajian ini bermanfaat untuk para penyelidik sebagai panduan dalam mengendalikan penyelidikan yang baik. Selain itu, ia adalah penting kepada kumpulan pengurus bank-bank Islam, para pelabur serta pendeposit bagi tujuan untuk mendapatkan pemahaman yang lebih baik mengenai prestasi bank-bank Islam di Malaysia.

Kata Kunci: Kecekapan keuntungan, Bank-bank Islam, faktor luaran dan faktor dalaman.

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BNM	Bank Negara Malaysia
FEM	Fixed Effects Model
GDP	Gross Domestic Product
IF	Impaired Financing
INF	Inflation
LGROW	Loan Growth
LLP	Loan Loss Provision
NI	Net Income
NIM	Net Interest Margin
PE	Profit Efficiency
STAFFX	Staff Efficiency
VIF	Variance Inflation Factor

Chapter One

Introduction

1.0 Introduction

Malaysian banking system consist of not only Islamic banks but also commercial and investment banks. This system contributes to the fund mobilizing and assisting the economic activities in Malaysia through financing. Today, as we are all concern, Islamic banks throughout the world, has been one of the fastest-growing sectors globally in the banking industry.

Presentation of this chapter offers 1.1 background of the study, 1.2 problem statement, 1.3 research questions, 1.4 research objective, 1.5 significance of the study, 1.6 justification on Islamic Banks in Malaysia, 1.7 contribution to body of knowledge, 1.8 limitation of the study and 1.9 organization of the Study.

1.1 Background of the Study

According to Ismail et.al (2013), Islamic banking refers to a banking system which is compliance with Shari'ah law. Further, Rahim et.al (2013), also agreed with Samad, Gardner and Cook (2005), they revealed that Islamic banking in Malaysia is unlike other countries in the world, where the first Malaysian Islamic Bank was commenced by the government called Bank Islam Malaysia Berhad (BIMB) in 1983. The government also developed and introduced "Interest-Free Banking Scheme" which enables Malaysia to be among the first globally that operates completely as an Islamic Banking institution. On the other hand, government through Bank Negara Malaysia

(BNM), introduces Islamic Window that offers dual banking system which are conventional and Islamic banking. There are numerous studies conducted to evaluate the growth on the Islamic banking efficiencies globally such as Ismail et al. (2013) with, Yudistira (2003), Hassan (2006), Mohamad et al. (2008), Moin (2008), Shahid et al. (2010).

In addition, Mokhtar et al. (2008) claim that since 1970s Islamic banking has been existing and have been experiencing rapid growth for the last 30 years. They further revealed that, Islamic banking practice has spread from East to West all over the world. According to Malaysia World Islamic Finance Marketplace (2018), the size asset of banking industry has achieved USD528.7 billion as for year 2017 from about hundreds of thousand dollars in year 1970s.

Bank Islam Malaysia Berhad (BIMB) is Malaysia's first full fledge Islamic bank that operated as full fledge Islamic banks since July 1983 with Lembaga Tabung Haji acted as the main shareholder. It lasted for 10 years before the Malaysian Government allows conventional banks to offer Islamic banking services. The conventional banks used the infrastructure and branches which already being existed in 1993 as "Islamic windows". It was thought that will be the most effective and efficient mode in raising the amount of Islamic banking institutions that offers banking services at the lowest cost within a shortest time frame (Ariff,2017; Mokhtar et al.,2008)

Furthermore, Abdullah et al. (2015), revealed that Malaysian Government has achieved assurance or confidence in the process of Islamic banking, which is to improve Malaysia's Islamic financial system in a short period of time so the country

will be able to be one of the main world players in Islamic banking and finance industry. In order to have an Islamic financial system, there must be more banks in the country and single Islamic banks is insufficient to operate in the country. Thus, the Government of Malaysia has allowed commercial banks in year 1993 to operates Islamic window which uses the existing branches infrastructure and staff. Interest free banking scheme was introduced on 4 March 1993 (later known as Islamic windows).

Meanwhile Mohamed Ariff (2017), explained that the root of Islamic banking is from the principles of Shari'ah. It describes the character and essence of financing provided and deposits mobilised. In Islam, interest is prohibited while trade is permitted by Allah.

بِسْمِ ٱللَّهِ ٱلرَّحْمَٰنِ ٱلرَّحِيمِ

ٱلَّذِينَ يَأْكُلُونَ ٱلرِّبَوٰاْ لَا يَقُومُونَ إِلَّا كَمَا يَقُومُ ٱلَّذِى يَتَخَبَّطُهُ ٱلشَّيْطَٰنُ مِنَ ٱلْمَسِّ ۚ ذَٰلِكَ بِأَنَّهُمْ قَالُوٓاْ إِنَّمَا ٱلْبَيْعُ مِثْلُ ٱلرِّبَوٰاْ ۗ وَأَحَلَّ ٱللَّهُ ٱلْبَيْعَ وَحَرَّمَ ٱلرِّبَوٰاْ ۚ فَمَن جَآءَهُۥ مَوْعِظَةٌ مِّن رَّبِّهِۦ فَٱنتَهَىٰ فَلَهُۥ مَا سَلَفَ وَأَمْرُهُۥٓ إِلَى ٱللَّهِ ۖ وَمَنْ عَادَ فَأُوْلَٰٓئِكَ أَصْحَٰبُ ٱلنَّارِ ۖ هُمْ فِيهَا خَٰلِدُونَ ﴿٢٧٥﴾

Those who consume interest cannot stand [on the Day of Resurrection] except as one stands who is being beaten by Satan into insanity. That is because they say, "Trade is [just] like interest." But Allah has permitted trade and has forbidden interest. So whoever has received an admonition from his Lord and desists may have what is past, and his affair rests with Allah. But whoever returns to [dealing in interest or usury] - those are the companions of the Fire; they will abide eternally therein.

Besides, profit in Islamic banking is obtained from al-bai' or sales contract. As contrast from conventional banks, the profits are gained from interest-bearing loans. In addition, business risk taking is what forms profit in Islam. Sales or trade in Islam is when money is exchanged with underlying asset. Comparing to the conventional side, the contract of interest-bearing loan evolves when money is swap for a bigger return (Ariff & Rosly, 2011).

In conjunction to that, figure 1 below shows the declination trend of profit for Islamic banks that year 2012 to 2016 for the Islamic Banks in Malaysia. Bank Islam Malaysia Berhad shows a trend of declination from 10% in year 2012 to 6% in year 2016. As for Bank Muamalat Malaysia Berhad, the trend shows fluctuation in year 2012 to 2016. In 2012, the profit decrease from 5% to -2% in 2013. It then increased to 9% in year 2014 and dropped to 5% in 2015. In 2016 it raised back to 7%. Maybank Islamic profit decreased from 10% in 2012 to 0% in 2016.

As for Kuwait Finance House there were fluctuation from 4% in 2012 to 6% in year 2013 and dropped to -2% in 2016. Alliance Islamic witness a trend of fall from 14% in 2012 to 4% in 2016. On the other hand, Hong Leong Islamic increased from 7% in 2012 to 14% in 2013. It then falls to 9% in 2015 and increased to 11% in 2016.

Nevertheless, HSBC Amanah shows a trend of declination from 2012 to 2016 where the profit falls from 13% to 5%. The figure I below shows the profit trend for Islamic Banks in Malaysia from the period 2012 to 2016. Basically, the profit (Net Income) for year 2012 and 2013 shows the highest which is Cimb Islamic Bank and OCBC Al-Amin Bank respectively for as much as 18% and the lowest is -2% that represents

Bank Muamalat Malaysia Berhad for year 2013, Kuwait Finance House for year 2015 and 2016 and Asian Finance in year 2012.

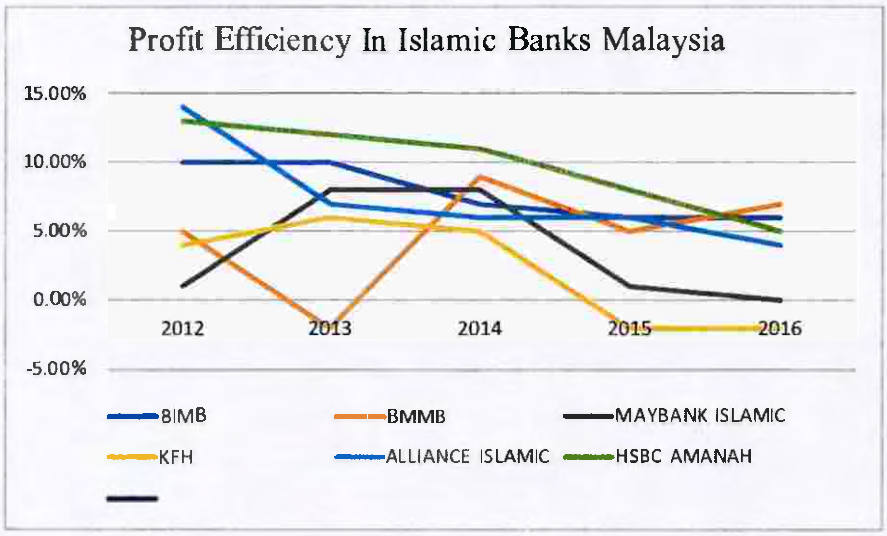


Figure 1.1: Depreciation of Profit of Islamic Banks in Malaysia.

It is highlighted that, there are issue that have been triggered between with GDP and Profit which was Goddard, Molyneux, and Wilson (2004) cited in Kanwal and Nadeem (2013), that found out that there is significant positive impact of GDP on the profitability of banks.

Acccording to Khasawneh (2016), the author supports Demirguc-Kuntand Huizinga, 1999; Bikker & Haaf, 2002; Khasawneh and Al-Khadash, 2014; they revealed that when the period of expansionary, the loan demand rises which lead the banks to cater more loans. Hence the GDP growth tends to have positive effect towards the profitability of the bank.

The issue evolved on GDP and impact on profit from year 2012 to 2016. In 2012, the GDP was 5.47% and the profit was 8.9%. The GDP then drop to 4.69% 2013 and the profit also dropped to 8.69 %. In 2014 the GDP rise to 6%, but the profit fall to 7.25%. In year 2015 the GDP decline to 5.02% while the profit dropped to 6.75%. In 2016, the GDP fall to 4.2 % and the profit increased to 7%. Hence the issue triggered is, when the GDP increased, the profit should be increased. However, in year 2014 the GDP rised but it effects a fall in the profitability of the Islamic Bank in Malaysia.

1.2 Problem Statement

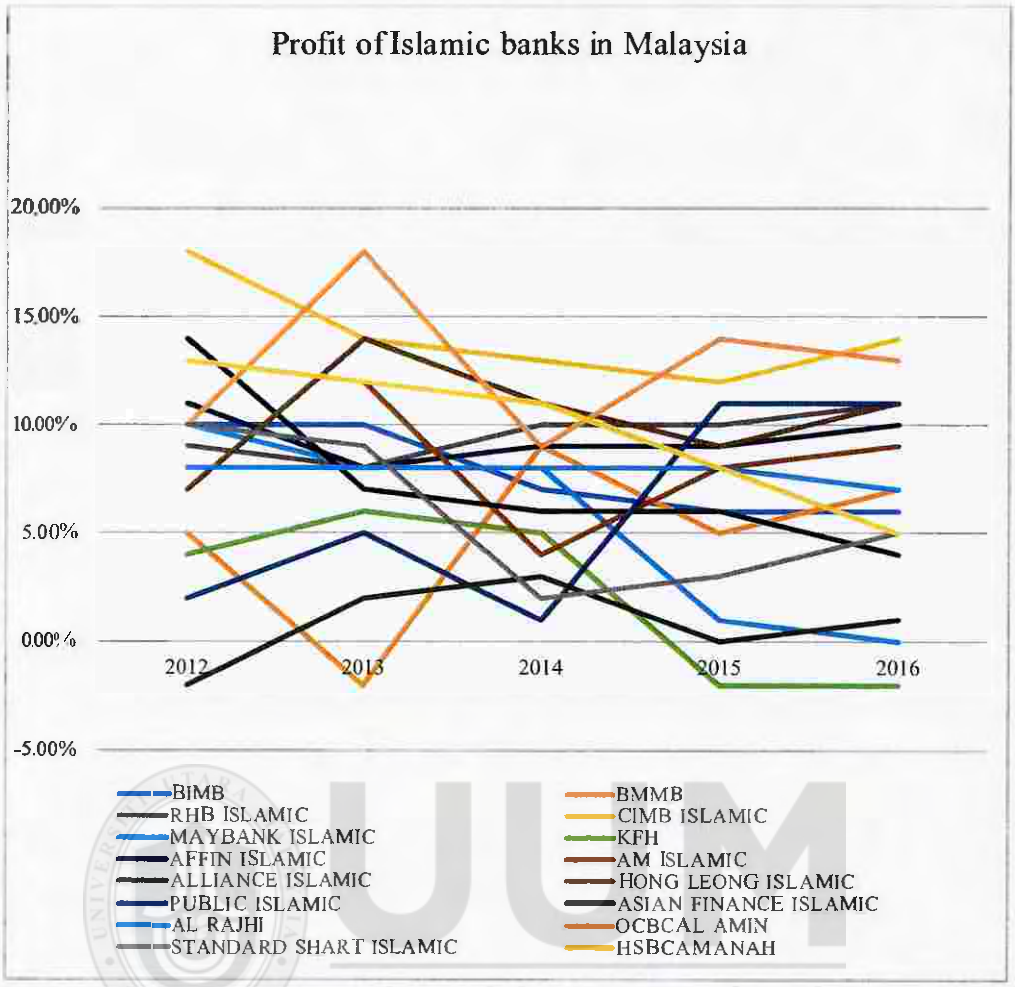
In 2007, the world has experienced global financial crisis which has affected the basis of the Islamic culture as well as its fast development (Shafique et.al, 2012). However, a study by Hasan & Dridi (2010), found out that the performance of conventional is lower compared to Islamic banking which is much better in terms of credit, asset growth and profit.

On the other hand, Parashar & Venkatesh (2010) stated that, there are arguments on the conventional and Islamic banks status with regards to the global financial crisis. Most researchers from previous studies stated that, Islamic banks are much more secured and better than conventional banks. According to Chapra (2008), highlighted the financial crisis that occurred globally started from summer 2007 has least affected on Islamic banks compared to Conventional banks.

In addition to the global financing crisis, there is theoretical gap in efficiency of Islamic banks where it correlates to the intermediation theory. According to Hassan et al. (2009) and Ariff, (2006) with regards to the intermediation approach, besides

functioning the same intermediary as conventional banks, Islamic banks however does not pay depositors a predetermined interest or gain from the borrower any predetermined interest. As for profit, Islamic banks uses the contract of profit loss sharing with both borrowers and depositors. Contradict with conventional banking, Islamic banks holds the principal of the forbiddance of interest (riba). Hence, Islamic bank utilizing profit loss share based on the Shariah law derived from Quran and hadith.

Crisis can be overcome by banks operating efficiently as they decrease the cost of financial intermediation. This can be seen when the funds are transferred efficiently to the producers by the savers; Berger and Bouwman (2013) supported by Almanaseer (2014) because during financial crisis, banks profit will be lower to absorb future loss. Failure to operate efficiently throughout the crisis period leads the banks to be taken out of the market. Figure 2 shows the selected Islamic banks Profit for year 2010 to 2016 as further reference on the profit.



Figurcl.2:Profit ofIslamic Banks in Malaysia from 2012 to 2016

After the period of financial crisis from year 2012 to 2016, Islamic banks in Malaysia shows a trend of fluctuating and there were certain banks that depreciated in profit. Bank Muamalat Malaysia Berhad for year 2013, Kuwait Finance House for year 2015 and 2016 and Asian Finance in year 2012 shows declination which reaches negative for as much as -2% are the worst among the other Islamic banks and lead the yearly profitability of Islamic banks to drop. While as for the highest point the Islamic bank achieved was the Net Income profit for year 2012 and 2013 by CIMB Islamic Bank and OCBC Al- Amin Bank respectively for as much as 18%. Hence, as for the

theoretical gap in this study, it is made to fill the gap that analyses from the period 2012 till 2016 differ from the previous studies. This will help Islamic banks to focus and compare on the trend of profit from year to year.

Empirically, substantial studies on profit efficiency have been done by previous scholars, such as Hassan, Mohamad and Bader (2009); Khasawneh (2016); Zarrouk, Jedidia and Moualih (2016); Sufian (2007); Bader, Mohamad, Ariff and Hassan (2008); Tahir and Haron (2010); Almanaseer (2014); Rahim, Bakar and Ganapathy (2015); Kamarudin et al. (2014); Rahim, Kadri and Ismail (2013); Mahendru and Bhatia (2017); Kamaruddin, Safa and Mohd (2008). Most of the studies mentioned above concentrates more towards identifying the factors that influence efficiency such as cost, revenue and profit and the impact on Islamic banks. However, this study will focus on profit efficiency of Islamic banks in Malaysia. This study will provide uniqueness on the independent variables which are rarely utilized in studies in regards with profitability of Islamic banks in Malaysia which are (NIM) and staff efficiency (STAFFX).

Other factors that included are revenue, total revenue, total loan, other earning asset, price of loans, price of other earning asset, total cost, labour, total funds, price of labour, price of funds, deposit, labour, loan, income, fixed asset, total loans, off-balance sheet items, price of fixed asset, price of loans, price of balance sheet items, profitability ratio, liquidity ratio, risk solvency ratios, asset quality capital, operations, annual stock data, economic activity, inflation, country and time (Rahim, Bakar and Ganapathy, 2015; Kamarudin,et al. , 2014; Hassan, Mohamad and Bader, 2009; Zarrouk, Jedidia and Moualhi, 2016; Bader, Mohamad, Ariff and Hassan, 2008).

In addition, the factors that have encountered in previous studies Islamic banks in Malaysia are equity ratios, off balance sheet activities, loan loss provision ratio, financial crisis, growth in real GDP, total earning assets, price of capital, price of deposits, total loans, income, total deposits, labour assets, personnel expenses, premises and fixed assets, price of labour, price of physical capital, profit before taxation, zakat, profitability, liquidity, risk, capital, efficiency, size, economic condition, inflation dummy variables, personnel expenses, total loans and securities portfolio; Khasawneh (2016); Tahir and Haron (2010); Sufian (2007); Kamaruddin, Safa and Mohd (2008); Almanaseer (2014); Rahim, Kadri and Ismail (2013).In contrast to this study, variables which utilized are gross domestic product (GDP), inflation (INF), impaired financing (IF), loan growth (LGROW), loan loss provision (LLP), net interest margin (NIM) and staff efficiency (STAFFX) on the dependent variable profit efficiency of Islamic banks in Malaysia.

Based on previous studies, as for empirical gap, it is hard to find studies that utilized net income as the measurement of profit efficiency as most studies conducted uses return on asset (ROA) and return on equity (ROE). This is supported by Kanwal & Nadeem (2013), whereby profitability is known as banks net after-tax income which is normally measured by Return on Assets (ROA) and Return on Equity ratios (ROE). On the other hand, limited studies use the selected variables like loan growth, net interest margin, and staff efficiency. As for net interest margin, least study tested it as independent variable due to net interest margin is a measurement for profit which is the dependent variable of previous studies for example studies by Kohler (2012) and San & Heng (2013). Meanwhile for staff efficiency is least tested towards Islamic banks profitability in Malaysia. Therefore, this study motivates the gaps in previous

studies by investigation in depth on the variable affecting profit efficiency. Thus, analysis of the selected variable on the profit efficiency contributes to Islamic banks to fill the gap of knowledge. Therefore, this study is conducted covering period of 2012 to 2016 to analyse the post period of Global Financial Crises (GFC) and the impact of the external factors (Gross Domestic Product and Inflation) and internal factors (Impaired Financing, Loan Growth, Loan Loss Provision, Net Interest Margin and Staff Efficiency) on profit efficiency of Islamic banks in Malaysia.

1.3 Research Questions

The study is set to answer the research question below:

1) How does the external factors (GDP, Inflation) influence the profit efficiency of Islamic Banks in Malaysia?

2) How does the internal factors (Impaired Financing, Loan Growth, Loan Loss provision, Net Interest Margin, Staff Efficiency) influence the profit efficiency of the Islamic Banks in Malaysia?

1.4 Research Objective

The general aim of this research is to examine the factors affecting the profit efficiency among Islamic Banks. To achieve this aim, the following specific objectives are set up as shown below:

1) To examine the influence of external factors which are Gross Domestic Product (GDP) and inflation on the profit efficiency of the Islamic Banks in Malaysia.

2) To investigate the influence of internal factors which are impact financing, loan growth loan loss provision, net interest margin and staff efficiency on the profit efficiency of the Islamic Banks in Malaysia.

1.5 Significance of the Study

This study is significant to researchers in understanding the study as well as the variable involved. The study enables the researcher to identify the external as well as the internal factors that give impact on Islamic Banks profit efficiency as well as help them understand on the new variables such as staff efficiency which has not been studied before on the profit efficiency in Malaysian Islamic Banks. This will help future researchers as guidance on the study they have selected and to make a good research.

The effect of the external and internal factors on profit also is important for the Islamic Banks management team as it helps them plan their strategies in improving the productivity of the Islamic Banks. Hence, this study contributes a great set of information in understanding how the profit efficiency of the Islamic Banks can be improved. Besides, this study also is beneficial for investors or depositor. This is because this study will enable them to have a greater understanding on the performance of the banks.

1.6 Justification on the selection of Islamic Banking in Malaysia

(i) Malaysia is one of the fastest growth Islamic banks in the world, whereby it consists of 16 Islamic banks. Ten of the Islamic banks are local owned Islamic Banks while the other six are foreign owned Islamic banks.

(ii) There is least published research that provides on the internal factors such as staff efficiency and net interest margin towards Malaysian Islamic banks profitability.

1.7 Contribution to the Body of Knowledge

This study is expected to add betterment to existing study in Islamic banking industry through the aspects of theoretical, conceptual as well as literature. From the prospect of theory, this study analyses on how profit correlates and effects the Islamic banking sector. From the conceptual view, this study is made to provide policy-makers, academician, consumers a better understanding in the field of efficiency towards Islamic banks. This study also contributes in the perspective of literature by emphasizing the data and finding on the selected Islamic banks in Malaysia. In addition, this study also provides betterment from previous studies by analysing precisely on existing variables like net interest margin which is least studied and new variables such as staff efficiency on Profit efficiency of Islamic Banks in Malaysia.

1.8 Limitation of the Study

Throughout conducting this study, the scope of the study is confined to investigating factors influencing profit efficiency of Islamic banks in Malaysia which covers 16 Islamic banks from year 2012 to 2016. This study is focused only to secondary data which consist of financial ratios which are mainly gained from the annual reports of the 16 Islamic banks derived from Fitch Solution database. Other than that, documents available to public which are published and relevant are used in this study.

This study was conducted precise and squarely. However, there are limitation faced by the researcher. Among the limitation faced is time constraint. This study is to be finished within a short period of time and the problem triggered was lack of time in encountering all scope affected. Besides that, another limitation is due to limited study on the selected variable. The researcher experienced the least amount of article that provides on the internal and external selected and its impact on profit efficiency.

Other than that, there are also limitation in the collection of data. This is caused by the inability to gain data from the available annual reports of the selected banks. Besides, theory used in this study also is based on conventional line. This is caused by the limited resource of Islamic theory in regards of profitability.

1.9 Organization of the Thesis

This research paper consists of five chapters. Chapter One provides introduction, the background of the study, problem statement, research questions, research objectives, scope and limitations of the study, definition of key terms and organization of the thesis. In Chapter Two, the content is literature review from previous studies which

included the theory and critical reviews. Chapter Three consist of Methodology used in this study which describes research framework, hypotheses or propositions development, research design, operational definition, measurement of variables or instrumentation and data collection which consist of sampling, data collection procedures and techniques of data analysis. The next chapter is Chapter Four that shows the results and discussion analyses of data and findings. Finally, Chapter Six contains the conclusion of the study by providiug the recommendation for future study.

Chapter two

Literature Review

2.0 Introduction

This chapter provides the reviews of the literatures and previous studies related to the concept of Profit Efficiency, relevant theories and the determinants of profit efficiency. Section 2.1 profit efficiency, Section 2.2 Section 2.3 provided evaluation of the external and internal factors influencing profit efficiency respectively. Section 2.4 explains on the related theories and finally Section 2.5 ends the chapter with a summary.

2.1 Profit Efficiency

Profitability based on Fitch Connect Solution is measured using net income cash dividends dividing with the total equity(%). Meanwhile, as defined by Rose (1999) cited in Kanwal & Nadeem (2013), profitability is known as banks net after-tax income which is normally measured by Return on Assets (ROA) and Return on Equity ratios (ROE). Basically, profitability of Islamic banks can be measured in many measurements such as return on asset (ROA), return on equity, (ROE), equity Multiplier (EM) net profit margin (NPM), net interest margin (NIM), net bank operating margin, earnings per share of stock (EPS)and profit expense ratio (PER), (Burhonov, 2006). As for Alharbi (2017), in the study measure profitability of Islamic banks using return on Asset (ROA) as well as net interest margin (NIM). According to (Iqbal and Molyneux, 2005), the measurement that is usually used in banks

profitability are Rate of Return on Assets (ROA) and the Rate of Return on Equity (ROE).

There are many previous studies that has been made on Islamic banks profit which are Bashir (2003),which examines the how entire financial environment and bank characteristic gives impact on Islamic banks performance; Bader, Mohamad, Ariff and Hassan (2008), conducted a study in comparing as well as measuring cost, revenue and profit efficiency and the effect of the independent variables towards cost, revenue and profit efficiency in Organization of Islamic Conference (OIC) countries; Kamarudin et al. (2008), conducted a study on cost efficiency and profit efficiency of Islamic windows which operates on foreign and domestic banks and full-fledge Islamic banks.; Tahir and Haron (2010) conducted a study that analyses profit efficiency and cost efficiency of the Islamic banks.; Wasiuzzaman and Tarmizi (2010), analyse the effect of bank characteristic and macroeconomics factor on Malaysian Islamic banks profitability which studies were conducted from year 2005 to 2008.; Abduh and Idrees (2013), they analysed the impact of bank-specific, industry specific as well as macroeconomics determinants on the profitability of Islamic banks in Malaysia. Besides, there are also studies by Rosly and Bakar (2003), Sufian (2007), Kamarudin et al. (2014), Rahim et al. (2015), Aliyu & yusnf (2016), Khasawneh (2016), Zarrouk, Jeddia and Moulhi (2016), Mahendru and Bhatia (2017), Alharbi (2017) and Akhtar, Ali and Sadaqat (2011). However, there are lack of studies that focused on measuring profitability using net income. Hence, this study will be conducted to add contribution to the study and to fill the gap to existing study by using net income as measurement of profit efficiency.

A study is conducted by Bashir (2003), which examines the how entire financial environment and bank characteristic gives impact on Islamic banks performance. The performance of Islamic banks of eight (8) Middle eastern countries are analysed for the period of 1993 to 1998. The study uses the regression method. Bader et al. (2008), conducted a study in comparing as well as measuring cost, revenue and profit efficiency and the effect of the independent variables towards cost, revenue and profit efficiency in Organization of Islamic Conference (OIC) countries. There were 43 Islamic and 37 conventional banks that was being tested in this study. The period taken is from 1990 to 2005 in 21 countries as stated in the OIC. Method that was used in this study is Data Envelopment Analysis (DEA).

Badrul and Mohammad (2008) conducted a study on cost efficiency and profit efficiency of Islamic windows which operates on foreign and domestic banks and full-fledge Islamic banks. There were Islamic bank operations offered by 14 commercial banks whereby it covers 2 Islamic banks and 12 Islamic windows of the commercial banks. This study is uses the method of Data Envelopment Analysis (DEA).Izah and Sudin (2010) conducted a study that analyses profit efficiency and cost efficiency of the Islamic banks. 193 banks from four regions of the world which are the Far East and Central Asia, Africa, Middle East and Europe are tested from the year of 2003 to 2008. A stochastic frontier approach was applied in this study.

Wasiuzzaman and Tarmizi (2010), analyse the effect of bank characteristic and macroeconomics factor on Malaysian Islamic banks profitability which studies were conducted from year 2005 to 2008. The study shows that the profitability was regressed by bank-specific determinants. OLS method were used in examining the data

gained from sixteen (16) islamic banks in Malaysia. As for study conducted by Abduh and Idrees (2013), they analysed the impact of bank-specific, industry specific as well as macroeconomics determinants on the profitability of Islamic banks in Malaysia. Based on this study, data was gained from ten (10) Islamic banks for period of 2006 to 2010 by using pooled regression analysis method. Rahim et al. (2015), studied in examining the efficiency of Islamic banks in Malaysia which covers seventeen (17) Islamic Banks in Malaysia. The period of study cover 2008 and 2009. This study employed descriptive statistic, percentage analysis and Data Envelopment Analysis (DEA).

A study conducted by Khasawneh (2016) on analysing the differences between Islamic banks and commercial banks through two aspects which are bank's profitability and bank's stability. Regression method is used in analysing a total of 268banks from 21 countries where 61 of them are Islamic banks while 207 others are commercial banks. The study examines period of 2006 to 2013 which cover year 2007/2008 where financial crises took place. Zarrouk et al. (2016), the study examines whether the profitability of Islamic bank is urge by the similar force that drives the conventional banks that covers Middle East and North Africa (MENA) countries. The study period is from 1994 to 2012 of 51 Islamic banks in MENA countries. This study is made to examine bank's specific determinants and macroeconomic factor that gives impact on the profitability. A System-generalized method was employed in this study.

Aziz (2017), analyses on the roles played by internal and external factor that influence the profitability of Islamic bank in Malaysia. The study analyzed the date that collected for ten (10) of Islamic banks in Malaysia over the period of 2009 to 2015. The study

regressed the data used fixed effect model to examine the determinants of Islamic bank in Malaysia. A study by Skinner (1999), stated that the performance of a firm is affected by net income because it consistently dominates comprehensive income. Hence, this study utilizes net income with the measurement extracted from Fitch Connect database.

2.2 External Factors

External factors known as macroeconomic factors are related to the economic activities and business cycle of the country such as gross domestic product (GDP) and inflation. The descriptions and past studies of each factor are reviewed in subsection 2.2.1 and 2.2.2.

2.2.1 Gross Domestic Product (GDP)

GDP is widely used as an indicator for overall economic activities of the country. GDP is defined as market value of all formally known final goods and services produced within the country's borders in a specific period (Hasan and Lehar, 2009). Past studies have been done such as Aliyu and Yusuf (2016), examines the significant elements that affects the profitability of Islamic banks of seven banks from seven selected countries which are Iran, Jordan, United Arab Emirate, Kuwait, Saudi Arabia, Sudan, and Tunisia. The study was from the period of 1995 to 2013; Wasiuzzaman and Tarmizi (2010), have analysed the factor that influence of profitability of Islamic bank in Malaysia from the period of 2005 to 2008; Khasawneh (2016), has analysed differences between commercial and Islamic banks in two aspects which are bank's profitability and bank's stability from year 2006 to 2013; Bashir (2000), examines bank characteristics and financial environment giving impact to the performance of

Islamic banks from year 1993 to 1998; Bashir (2003), analysed the determinants of Islamic banks' performance from year 1993 to 1998 for eight (8) Middle Eastern countries;. shows a positively significant relationship between GDP and profitability in the banking sector.

On the other hand, Obamuyi (2013), has analysed on the determinants of bank profitability in developing economy, which tested on Nigeria from the period of 2006 to 2012; Francis (2013), analysed on the determinants that effect the profitability of commercial bank in Sub-Saharan Africa between the period of 1999 to 2006; Gul, Irshad and Zaman (2011), analyses on the relationship between bank-specific and macro-economic characteristics upon the profitability of banks for fifteen (15) commercial banks in Pakistan from year 2005to 2009;shows a positive relation Between GDP and bank's profitability.

As for the studies by Tan and Floros (2012), studied on the impact of GDP towards the profitability of bank in China. The period tested was from 2003 to 2009 and showed the negative relations between GDP and bank's profitability. This is supported by Alharbi (2017), which gained from the studies that GDP has negatively relations on the profitability in the 25 countries that were members of the Organization of Islamic Cooperation (OIC). Nevertheless, Abduh and Idrees (2013), provided evidence from the studies made whereby GDP and profitability of banking sector has negatively significant relationship

2.2.2 Inflation

Hussain and Malik (2011) define inflation as a persistent growth in the accepted price indeces on account where a wide range of living cost has increased to a stage where the public is feeling poorer Inflation normally is calculated by percentage changes in consumer price index (CPI) and it is broadly used as an indicator for economic condition of the country. A study conducted by Aziz (2017), analysed the determinants of Islamic bank in Malaysia over the period of 2006 to 2009 found that inflation has significant and positive relationship to profitability of Islamic bank in Malaysia. Wasiuzzaman and Tarmizi (2010), have analysed the factor that influence of profitability of Islamic bank in Malaysia from the period of 2005 to 2008. In the study it is found that inflation gives a positive and significant impact on the profit of Malaysian Islamic banks; it is also supported by Abduh and Idrees (2013), whereby they found that inflation has significant and positive effect on Islamic bank's profitability in Malaysia from the period of 2006 until 2010.

On the other hand, Norman, Chowdhury, Chowdhury, Kabir and Pervin (2015) made a study in examining the bank specific and macroeconomic determinants of profitability which covers the period of 2003 to 2013 for 35 banks in Bangladesh. The studies showed in the findings that inflation has significant and positive relationship towards the bank's profitability. Other than that, Bashir (2003), analysed the determinants of Islamic banks' performance from year 1993 to 1998 for eight (8) Middle Eastern countries which shows there are positively significant effect of Inflation on profitability. Athanasoglou, Delis and Staikouras (2006) also supported there are positive effect on the profitability for the banks in South Eastern European

region. Bashir (2000), from the studies conducted found a positive relationship between inflation and profitability.

In contrast to that, Sufian and Chong (2008), analysed on the determinants that impacts the Philippines banks profitability from year 1990 to 2005. Hence the findings show a negative significant correlation between profitability and inflation. This is supported by Francis (2013), where the studies found that inflation and profitability are negatively significant in the commercial bank in Sub Saharan Africa

2.3 Internal Factors

Internal factor which known as the bank specific would have relationship to the profitability of banking sector.

2.3.1 Impaired Financing

According to Rose (2002), impaired financing happens when customers delay their repayment for 90 continuous days from their scheduled repayment due date. According to Ahmad (2003), impaired financing is measured by non-current financing divided by the total financing.

A study by Căpraru and Ihnatov (2014) is conducted in analysing the main determinants of banks' profitability for five selected Central and Eastern European countries. The test covers period from 2004 to 2011 which consists of sample of 143 commercial banks from Poland, Czech Republic, Romania, Hungary and Bulgaria. The findings in the study shows credit risk which is measure by impaired loans over gross loans is negatively significant towards the profitability of bank. This is also

supported by Kaaya & Pastory, (2013) which examines the impact of credit risk which was measured using the ratio of nonperforming loan, loan loss to net loan, loan loss to gross loan and impaired loan to gross loan towards the banks' performance. The data consist of 11 banks in Tanzania. Based on the findings, there are negative significant impact between credit risk and banks' performance. The result shows that, the banks performance can be by effective risk management. This is because, it will decrease the non-performing loans and loan losses.

In addition, Ekpu and Paloni (2015) investigated on the profitability which is determined by the bank's diverseness. The data was extract from Bankscope which covers 83 UK banks for the period 2005-2009. The study applied panel fixed effects estimation. As the findings, ROE was increase due to the growing loan portfolio. However, a greater loan loss reserves, larger amounts of impaired loans, increased costs and non-interest expenditure have lead towards a negative effect upon the return on equity or known as the banks' profitability. As the study by Salike and Ao (2017), the study was conducted in determining Asian Banks' profitability in regards with the role of asset quality. The study employed fixed effect estimation for 947 banks over 12 Asian economies. The period covered was from 2001 to 2005. The findings show with rise in loan, banks will have failure in collecting from the borrowers which is known as impaired loans. This shows that impaired loans have negative significant impact on bank's ROA or profitability.

Besides, Kolapo, Ayeni and Oke (2012) also examine the impact of credit risk on performance of banks. There are total of 5 banks in Nigeria was tested covering the

period from 2000 to 2010. The result shows, nonperforming loans and loan losses provisions are negatively significant affecting the performance of the banks.

2.3.2 Loan Growth

Loan growth is a basic measure of credit risk, however the role of loan growth in creating subsequent non-performing loans is incontrovertible (Skala ,2012). Ben Ameur and Mhiri (2013) claims that loan growth is bank's annual growth in spending on financing to their customers. A study by Khan, Anuar, Choo and Khan (2011), is conducted in examining the bank's profitability in consideration of bank specific variables. The study analysed 16 banks in Pakistan for the range of period 2000 to 2010. The result shows that there are positive and significant impact on the profitability of the banks in Pakistan. As for Kundid, Škrabić and Ercegovac (2011), the study examines on Republic of Croatia determinants of commercial banks' profit which uses econometric method. The analysis is made for the total of 28 commercial banks in Croatia from year 2003 to 2008. The result shows a positive significant impact of loan growth towards bank profitability.

This is also supported by Gizycki (2001), which studied in analysing the entire variability of Australian banks credit risk in the year 1990s. The outcome of the study shows a positively significant relationship shown by real credit growth or loan growth towards the banks' profitability. As stated in the study, each percentage point incline in the share of interest in corporate income is predicted to decrease the return on assets for points as much as 0.01 percent. As for Isanzu (2017), the author made a study which examine the effect of risk towards the financial performance of Chinese banks. The study tested on five commercial banks in China covering the period of 2008 to

2014. From the result, there shows evidence that credit risk management has been enhance over the past years and is able to decrease the negative impact of credit risk towards the financial performance of banks. In fact, the result also shows nonperforming loans and capital adequacy as measures of credit risk turns out to be positively significant towards the banks financial performance.

As for Ugoani (2016), conducted a study for the period of 1990s which comprised 20 Deposit Money Banks (DMBs) in Nigeria. From the study it shows non-performing loan has negative effect on the profitability of the banks. This shows that non-performing loan impact the loan growth negatively and at the same time lead the banks in Nigeria to be negatively significant as it reduces interest income and loan amount of the bank at a same time. From the past studies, it shows a very limited studies that is conducted to show the impact of loan growth towards the profitability of banks. Hence, this study is conducted to show the effect of loan growth towards towards the profit ofIslamic banks in Malaysia.

2.3.3 Loan Loss Provision

According to Ahmad (2003), loan loss provision shows the bank's cash or cash equivalent section put aside in order to predict the potential loss in loan portfolio. This reserve a shrink accordingly when loans are repaid while as the loans are made, it rises. Reobtaining collateral is liquidated and it is credited to loan loss provision in cases of defaulted loans.

As for Ana et al. (2011), the study examines on Republic of Croatia determinants of commercial banks' profit which uses econometric method. The analysis is made for

the total of 28 commercial banks in Croatia from year 2003 to 2008. The result shows a negative significant impact of loan loss provision towards bank profitability. As for Anthanasoglou, Brissimis and Kaddumi (2005), the study is conducted to analyse industry specific, bank specific determinants of macroeconomic towards bank's profitability. The test covers period from 1985 to 2001 for banks in Greek banks. It was found that the result shows a negative impact by loan loss provision towards banks' profitability. This is also supported by the study of Ramadan, Kilani and Kaddumi (2011), which studied on the Jordanian banks to determine the relationship between internal factors and internal factors with banks' profitability. The study was made for 10 banks from year 2001 to 2010. Hence, the study shows a negative effect of loan Loss provision towards the profitability of banks. Next is a study conducted by Tan (2016), whereby it tested the effect of risk and competition towards Chinese banking industry which covers period from 2003 to 2011. This study also shows a negative significant effect towards banks profitability.

In addition to that, Menicucci and Paolucci (2016) conducted a study to examine relationship between the bank specific characteristics as well as profitability in European banks. There were 35 top European banks that was analysed for the years 2009 to 2013. The result also shows a negative impact of loan loss provision towards the profitability. This is also agreed by Dietrich and Wanzenried (2010), examine the banks' profitability for 372 commercial banks in Switzerland for the year 1999 to year 2009. The findings also showed a negative effect of loan loss provision towards profitability of the banks. It is also supported by Akbas (2012), which the study was made to analyse bank-specific, industry-specific and macroeconomic factors impact towards 26 commercial banks profitability in Turkey. The period covers period from

2005 to 2010. This study also shows a negative significant effect of loan loss provision towards profit of the banks. Other than that, Khasawneh (2016), on analysing the differences between Islamic banks and commercial banks through two aspects which are bank's profitability and bank's stability. Regression method is used in analysing a total of 268banks from 21 countries where 61 of them are Islamic banks while 207 others are commercial banks. The study examines period of2006 to 2013 which cover year 2007 and 2008 where financial crises took place. The findings also show a negative impact of loan loss provision towards Profitability.

Alhadab and Alhasawneh (2016), conducted a study in order to analyse the effect of loan loss provision on the profitability of Jordanian commercial banks. There were 13 banks which were listed on Amman Stock Exchange (ASE) were tested covering period of 2004 to 2014. This study shows that loan loss provision contributed negatively towards banks profitability. According to Mustafa, Ansari and Younis (2012), the study has been made in analysing the loan loss provision affects towards the banks performance which operates in Pakistan. Thus, the result of the study shows a negative significant contribution of loan loss provision to the banks performance. Based on the previous studies, all studies found shows negative significant impact of loan loss provision towards banks profitability.

2.3.4 Net Interest Margin

Definition of net interest margin (NIM) is NIM divided by total assets. It focuses on the earned profit as well as the interest activities (Ben Ameur and Mhiri, 2013). NIM is calculated by dividing interest income net off interest expenses by total assets. This ratio analyse the operation and how competent the bank utilized their assets in

generating income. Higher ratio, indicate that bank is doing well. A study by Khan et al. (2011), is conducted in examining the bank's profitability in consideration of bank specific variables. The study analysed 16 banks in Pakistan for the range of period 2000 to 2010. The findings show that net interest margin is positively significant and contributes in the bank profitability. Other than that, a study by Demirguc-Kunt and Huizingha (1999), was conducted to analyse the determinants of bank interest margins and profitability for a total of 80 countries covering the period from 1988 to 1995. The findings show that well capitalized banks have higher net interest margins and leads the banks to be more profitable. Hence the study shows a positively significant relationship.

Other studies indicate that net interest margins are used to measure the bank's profitability and is used as the dependent variable. According to Kohler (2012), net interest margin which are high as reported by banks are triggered more stable and is positively significant by the coefficient for net interest margin. This is uniform with the discussion's hypothesis whereby there is a lesser need by banks to increase risk taking in gaining the target rate of return due to having a high net interest margin. It also shows a positive sign of net interest margin on bank stability as a long-term effect. This is also supported by San and Heng (2013), where the study conducted investigates the effect of bank-specific characteristics as well as macroeconomic conditions on the financial performance of Malaysian commercial banks. The study covers the period of 2003 till 2009. Besides return on assets and return on equity, net interest margin also is used to measure profitability and it is found that liqnidity ratio and equity assets ratio was positively significant with return on assets. As for bank size, it shows positive significant relationship with return on equity, while loan loss reserves to gross loans

ratio shows result of negative significant relationship with net interest margin and return on assets. Based on previous studies, least studies were made to show the relationship between net interest margin and profitability and there were also studies that uses net interest margin as the measurement of profitability which is the dependent variable of the studies. Hence, this study is conducted to show the effect of net interest margin towards towards the profit of Islamic banks in Malaysia.

2.3.5 Staff Efficiency

Staff efficiency is calculated by dividing personnel expenses by net interest income which is a measure of how effective a bank is in using personnel expenses to generate income (Hays, De Lurgio & Gilbert, 2011). From the studies of Ton (2009) and Athanasoglou *et al.* (2008), the findings show that there is a positive relationship between high management quality and bank profitability. It was also supported by the study Athanasoglou *et al.* (2006) whereby the findings show that institutions' internal resource should be the priority of defensing the financial system before adopting from external control which improves the bank's performance. In addition, Athanasoglou *et al.* (2005) examines the bank-specific, industry-specific and macroeconomic determinants of bank profitability in Greece which result show that labour productivity growth has a positive and significant impact on the profitability of the bank.

Meanwhile, Bashir and Hassan (2004) provides findings that employee productivity and human capital efficiency is positively and significantly related to firm performance and profitability. Furthermore, Wanyama and Mutsotso (2010), studied the relationship between capacity building and employee, productivity on performance of

commercial banks in Kenya suggested that the organization performance increases when they have high capacity building with productive employee and high job skills.

In addition, Mat Nor and Ahmad (2015) studied on the relationship of staff efficiency as a moderator towards impaired financing which findings shows there are positive and significant relationship. Impaired financing is reduced due to the efficiency of staff in assessing, monitoring, selecting and controlling in regards with loan portfolio or loan growth. Contradict to it, when staff efficiency is negative, hence its crucial in reducing impaired financing that results in a higher profit. According to Mat Nor, Ahmad and Ahmad (2017), studied on 22 banks from MENA countries covering the recent nine years to 2013 which staff efficiency acts as a moderator in this study. The findings show there is a positive impact on impaired financing affecting banks profitability.

2.4 Related Theories

2.4.1 Financial Intermediation

Financial intermediation theory was developed by Diamond (1984) as cited in Boot (2000). Boot (2000) stated that where a bank will manage as well as absorb the risk occurs. It will be issued on the claim of the total asset with dissimilar characteristics in regards with the loan portfolio. As for Rahman and Zada (2014), what it could be understood as financial intermediation is, it is a procedure taken in channelling funds and facilitating the funds to the deficit sector as it is gained from the surplus sector of the society. Hence, financial intermediation acts an agency between the two groups and it result in the imbalance of capital market. As from the conventional perspective,

agency accepts the surplus money for instance in a form of loan and will be lend to borrower in deficit. This shows a relationship between both parties as it charges fee upon agency it performs. Khaldi and Hamdouni (2011) stated from the view ofIslamic, agency which complies with Islamic principles based on mudharabah where capital is gained from the first group and pass to the second group in the form of trading or participation.

According to Allen and Gale (2000), the theory of financial intermediation has different functions which are important for the financial set up stability and its growth. Besides having a gap between the society's surplus and deficit sectors, there are also presence risk sharing between both house hold and firms. Elgari (2003) has highlighted a few basic functions in regards with the financial intermediation. Firstly, the banks will transfer non-liquid asset into liquid asset whereby it can be seen when banks receive liquid cash from the investors and exchange with other instruments which will be used by people besides cash. As for cash notes, they will be transferred into non-liquid assets. The second function is to transform the short-term assets into long term assets. According to Fobbozi and Modigliani (1992), basically, banks will gain cash from investors for a short period and then will transform into asset which are long term. Share of profit will be received by banks by taking cash with a low interest rate and when it is lent, the rate will be high due to having a longer period. Last function is smaller assets are converted into assets with a big potion. The financial intermediaries will collect small savings and change into huge capital sum. This can be used for the well-being of country's economy by governments or big corporations. In regards with the variables (Gross Domestic Product, inflation, impaired financing, loan growth, loan loss provision, net interest margin and staff efficiency) in this study, all variables

are related to the bank's performance and profitability. Hence, the financial intermediation theory contributes to the findings of the study.

2.4.2 Agency Theory

According to Jensen's and Meckling (1976) as cited in Almanaseer (2014), agency theory is related with principals and agents or managers and owners conflict of interest. Agency costs and ownership structure is important in the literature of corporate governance whereby it is related to the assumptions on agency problems. There will be contract between owners and managers to the owners contract the managers to operate the main task of the organisation or firm as well as to maximize their own utility. This is also to invoke conflict of interest to increase.

As for Berger and Patti (2003), one of the component of agency theory is on measuring profit efficiency. Profit efficiency is said to be suitable measure in testing agency cost theory as it has authority upon the local market price effect and other external factors. This is also because it offers a rational standard for each organisation's performance when there is minimization in agency cost. Besides, profit efficiency is better than cost efficiency in assessing the performance of managers. This is because it is appropriate to analyse how well managers raise the firm's revenues besides controlling costs. This is similar with value maximization concept. As for this study, in regards with the variables (Gross Domestic Product, inflation, impaired financing, loan growth, loan loss provision, net interest margin and staff efficiency), all variables are related to the bank's profit efficiency. Hence, agency theory is related to the variables of this study.

2.5 Chapter Summary

In this chapter, the researcher explained comprehensively on the literature review of previous studies as provided in this chapter. The reviews have been organized on four (4) perspectives namely measurement of profitability, previous studies on profitability, external and internal factors, and related theories to the study. Review on profitability provides the overall concept of the focus of the study. The following Chapter will be precisely on the methodology of the study.

Chapter Three

Methodology

3.0 INTRODUCTION

This chapter explains the research design and methodology of this study. The sequence of discussion of this chapter started with 3.1 research framework, 3.2 hypotheses development, 3.3 research design, 3.4 operational definition and measurement of variables, and 3.5 data collection and techniques of 3.6 data analysis. Finally, is 3.7 the chapter summary.

3.1 RESEARCH FRAMEWORK

In a research, research framework or mainly known as theoretical framework enables the researcher to create hypothesis based on the variables involved in the related area of studies. This theoretical framework correlates with theories that involved and to be measured in the study. In this study, the dependent variable is profit efficiency, while the independent variables are divided into external and internal factors. The external factors are Gross Domestic Product (GDP) and inflation, while the internal factors are loan growth, impaired financing, loan loss provision, net interest margin and staff efficiency. The researcher proposes a framework shown in the Figure 3.1 below:

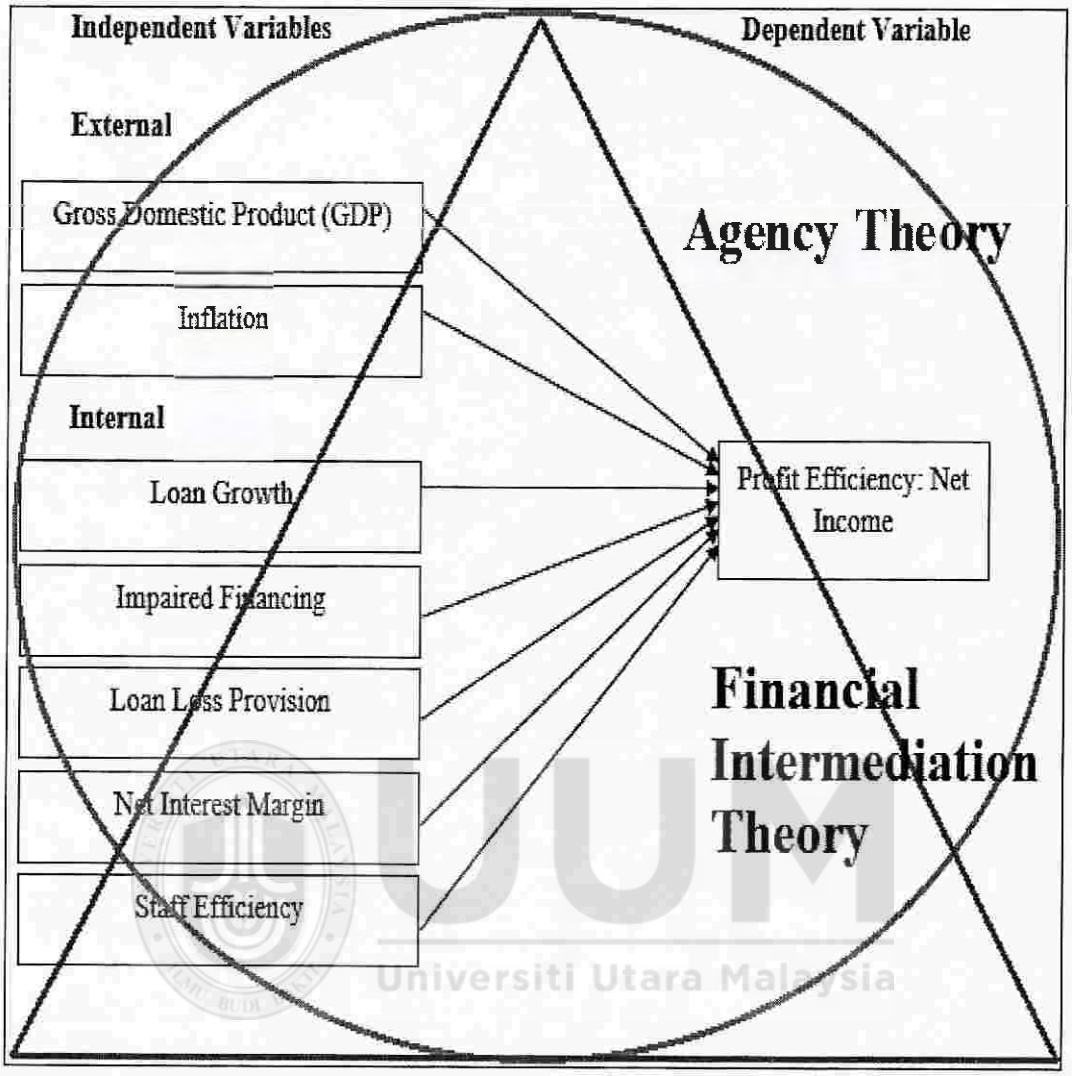


Figure 3.1

Theoretical Framework for Profit Efficiency of Islamic Banks in Malaysia.

Figure 3.1 shows the theoretical framework which consist of dependent variable as well as independent variables. Profit efficiency of the Islamic banks is determined as the dependent variable while the independent variable is divided into two factors which is external factors and internal factors. The external factors are Gross Domestic Product (GDP) and inflation, while the internal factors are impaired financing, loan growth, loan loss provision, net interest margin and staff efficiency. Some of the variables in this study are rarely being utilized. Hence, they are being tested to show the contribution to this study.

Based on the theoretical framework, shows that this study's variables (Gross Domestic Product, inflation, impaired financing, loan growth, loan loss provision, net interest margin and staff efficiency), are related to the banking sector. Hence, both theories explain on all the variables that are being tested in this study.

3.2 HYPOTHESES DEVELOPMENT

In this study, the researcher developed the hypotheses in regards with the theories that evolved in this study and the relationship between independent and dependent variables. There are seven independent variables which are Gross Domestic Product (GDP), inflation, impaired financing, loan growth, loan loss provision, net interest margin and staff efficiency and profit efficiency as the dependent variable.

3.2.1 External Factors

3.2.1.1 Gross Domestic Product

Khasawneh (2016) and Bashir (2003), the studies conducted shows a positively significant relationship between GDP and profitability in the banking sector. Thus, this study hypothesized that:

H_1: Gross Domestic Product (GDP) has a positive and significant impact on profit efficiency of Islamic Banks.

3.2.1.2 Inflation

Aziz (2017), found that inflation has significant and positive relationship to profitability of Islamic bank in Malaysia. Wasiuzzaman and Tarmizi (2010), in the study it is found that inflation gives a positive and significant impact on the profit of Malaysian Islamic banks. Thus, this study hypothesized that:

H_2: Inflation has a positive and significant impact on profit efficiency of Islamic Banks.

3.2.2 Internal Factors

3.2.2.1 Impaired financing

According to Ekpu and Paloni (2015) there are negative and significant impact between impaired financing and banks' profitability. This is also supported by Salike and Ao (2017). Thus, this study hypothesized that:

H_3: Impaired financing has a negative and significant impact on profit efficiency of Islamic Banks.

3.2.2.2 Loan Growth

A study by Khan et al. (2011), the result shows that there are positive and significant impact on the profitability of the banks in Pakistan. As for Ana et al. (2011), the study result shows a positive significant impact of loan growth towards bank profitability. Thus, this study hypothesized that:

H_4: Loan growth has a positive and significant impact on profit efficiency of Islamic Banks.

3.2.2.3 Loan loss provision

Menicucci and Paolucci (2016), the study result shows a negative significant impact of loan loss provision towards bank profitability. Thus, this study hypothesized that:

H_5: Loan loss provision has a negative and significant impact on profit efficiency of Islamic Banks.

3.2.2.4 Net interest margin

A study by Khan et al.(2011), shows in the finding that net interest margin is positively significant and contributes in the bank profitability. Besides, as study by Demirguc-Kunt and Huizingha (1999), also provide findings that well capitalized banks have higher net interest margins and leads the banks to be more profitable. Hence the study shows a positively significant relationship. Thus, this study hypothesized that:

H_6: Net Interest margin has a positive and significant impact on profit efficiency of Islamic Banks.

3.2.2.5 Staff efficiency

Athanasoglou *et al.* (2005) provide findings that labour productivity growth has a positive and significant impact on the profitability of the bank. This directly shows that staff efficiency contributes positively to banks profitability. Thus, this study hypothesized that:

H_7: Staff efficiency has a positive and significant impact on profit efficiency of Islamic Banks.

3.3 RESEARCH DESIGN

According to Zikmund (2000), research design is a framework for the purpose to conduct research. It is a design that explains on the method and procedures involved in the study as well as analysing the information. According to Creswell (2014), quoted Denzin & Lincoln (2011), stated that research design consists of three types of approaches which are qualitative, quantitative, and mixed methods which contributes to a particular procedures orientation in a research design.

Quantitative research is an approach which determines the relationship of both independent and dependent variables in a specific area. In a quantitative design, the researcher developed a study which is either descriptive or experimental. A descriptive study measures the subject once while for experimental the researcher will measure it twice before and after (Hopkins, 2000.)

This study uses annual financial report derived from 16 Islamic banks' and Fitcb Connect database. The study intends to investigate one dependent variable which is profit efficiency, independent variables which consist two externals and five internals. Hence, the researcher implies a time series data for a period of time to be examined by using the panel data analysis.

3.4 OPERATIONAL DEFINITION AND MEASUREMENT

According to Cavana, Delahaye & Sekaran (2001), operation is defined as an idea in identifying what should be assess in each question by the aspect of behavioural variables, features or properties by the conceptualization. In this study, the researcher measures dependent and independent variables for the purpose to answer research question and research objectives. Profit efficiency of the Islamic banks is determined as the dependent variable while the independent variable is divided into two factors which is external factors and internal factors. The external factors are Gross Domestic Product (GDP) and inflation, while the internal factors are loan growth, impaired financing, loan loss provision, net interest margin and staff efficiency. The operation definition of the dependent and independent variable is discussed in the following section. Below shows Table 3.1 on the summary of variables definition and measurement and Table 3.2 on the summary of the variables measurement.

Table 3.1

The Summary of Variables Definition and Measurement.

Variables	**Operational Definition/Measurement**	**Source**
Profit Efficiency (PE)	According to Fitch Connect Solution, net income is measured by net income minus cash dividends dividing with the total equity (%). Besides that, net income also is considered one of the components of profitability.	Fitch Connect Database
Gross Domestic	GDP can be defined as the total market value of all final goods and services in a period of time produced in the country. In comparing one country to another, GDP percapita is calculated by using GDP Annual Growth which is determine by World Development Bank Indicator.	Ivković (2016), & World Development Bank Indicator
Inflation (INF)	Inflation shows the economy's changes in general price level. It is measured using consumer	Ben Ameur and Mhiri, (2013)& World Development Indicator
Impaired Financing (IF)	Repayment defaults for 90 days and more. Measured by: $\frac{\text{Non-Current Financing}}{\text{Total Financing}}$	Rose (2002) & Ahmad (2003)
Loan Growth (LGROW)	Loan growth is banks' annual growth in spending on financing to their customers and it is measured by: $\frac{\text{Current year total loan- Previous year total loan}}{\text{Previous year total loan}}$	Ben Ameur & Mhiri (2013) & Fitch connect Database
Loan Loss Provision (LLP)	The portion of a bank's cash or cash equivalents holdings set aside to cover predict potential losses in its loan portfolio. This reserve a shrink accordingly when loans are repaid while as the loans are made, it rises. Reobtaining collateral is liquidated and it is credited to loan loss	Ahmad (2003) & Fitch Connect Database

Continuation Table 3.1

The Summary of Variables Definition and Measurement.

Variables	Operational Definition/Measurement	Source
	provision in cases of defaulted loans. Measured by: $\frac{\text{Loan Loss Provision}}{\text{Net Interest Revenue}}$	
Net Interest Margin (NIM)	The difference between interest income and interest expenses in dollar, expressed as a percentage of average earning assets. Measured by: $\frac{\text{Interest Income - Interest Expenses}}{\text{Total Assets}}$	Khan, Anuar, Choo and Khan (2011) & Fitch Connect Database
Staff Efficiency (STAFFX)	Measurement on bank efficiency utilizing personnel expenses in generating income. Measured by: $\frac{\text{Personnel Expenses}}{\text{Net Interest Income}}$	Hays, De Lurgio & Gilbert (2011) Fitch Connect Database

Table 3.2

The Summary on Measurement of Variables.

Types of Variables	Variables	Notation	Measurement
Dependent Variable	Net Income	NI	Net income-Cash Dividens / Total Equity (%) -Fitch Connect Database
Independent Variables	Gross Domestic Product	GDP	GDP Annual Growth -(World Development Bank Indicator)
	Inflation	INF	Consumer Price Index -(World Development Bank Indicator)
	Loan Growth	LGROWTH	Current year total loan- Previous year total loan /Previous year total loan -Fitch Connect Database
	Impaired Financing	IF	Non-Current Financing Total Financing -Fitch Connect Database
	Loan Loss Provision	LLP	Loan Loss Provision Net Interest Revenue -Fitch Connect Database
	Net Interest Margin	NIM	Net Interest Income Total Asset -Fitch Connect Database
	Staff Efficiency	STAFFX	Personnel Expenses Net Interest Income -Fitch Connect Database

3.5 DATA COLLECTION

The data collection for this study is as discussed in the following sections which are data sources, population and data collection method as stated below:

3.5.1 Data Sources

This study used secondary data. The sources of the data for analysing the variables over the period of 2012–2016 is gain from annual financial report derived from fitch connect. This period was chosen because there is availability of data and post Global Financing Crises (GFC) period. The selected banks are taken from a source which is Bank Negara Malaysia.

3.5.2 Population

The population of this study consist of all 16 licensed Islamic banks of Malaysia under Bank Negara Malaysia. The banks consist of ten Islamic local banks and six foreign Islamic banks. They are as shown in Table 3.3 below:

Table 3.3: *List of Islamic Banks in Malaysia.*

No.	Islamic Banks
1.	Affin Islamic Bank Berhad
2.	Al Rajhi Banking & Investment Corporation (Malaysia) Berhad
3.	Alliance Islamic Bank Berhad
4.	AmBank Islamic Berhad
5.	Asian Finance Bank Berhad
6.	Bank Islam Malaysia Berhad
7.	Bank Muamalat Malaysia Berhad
8.	CIMB Islamic Bank Berhad
9.	HSBC Amanah Malaysia Berhad
10.	Hong Leong Islamic Bank Berhad
11.	Kuwait Finance House (Malaysia) Berhad
12.	Maybank Islamic Berhad
13.	OCBC Al-Amin Bank Berhad
14.	Public Islamic Bank Berhad
15.	RHB Islamic Bank Berhad
16.	Standard Chartered Saadiq Berhad

Sources: Bank Negara Malaysia (BNM), 2018

The financial data is obtained from Fitch Connect Database which derived from the financial report of the respected banks and World Development Bank Indicator. Therefore, the researcher has to look precisely for each bank either there have appropriate data to support the findings later on.

3.5.3 Data Presentation

This study adopted the regression analysis in order to answer the research question. Regression analysis is understood as a statistical technique which comes out with result and relation of the estimated relationship between the variables (Uyanik and Guler, 2013). This regression model will analyse the relationship between both independent variables (x) and dependent variable (y). According to Brook (2008), in this regression model, if x has significant effect on y, the changes of x also will give impact on the

changes in y. Thus, the researcher will use multiple linear regression analysis to analyse the impact of the external and internal factors upon the profit efficiency of Islamic banks in Malaysia. The equation is as follows:

$$y_{it} = \alpha_0 + \beta_1 x_{it} + \beta_2 x_{it} + \ldots\ldots\ldots + \varepsilon_{it}$$

3.5.3.2 Multiple Regression Models

The regression equations for this study are as follows:

(i) Pool Factors.

$$PE_{it} = \alpha_0 + \beta_1 GDP_{it} + \beta_2 INF_{it} + \beta_3 LGROW_{it} + \beta_4 IF_{it} + \beta_5 LLP_{it} + \beta_6 NIM_{it} + \beta_7 STAFFX_{it} + \varepsilon_{it} \quad (1)$$

(ii) External Factors.

$$PE_{it} = \alpha_0 + \beta_1 GDP_{it} + \beta_2 INF_{it} + \varepsilon_{it} \quad (2)$$

(iii) Internal Factors.

$$PE_{it} = \alpha_0 + \beta_1 LGROW_{it} + \beta_2 IF_{it} + \beta_3 LLP_{it} + \beta_4 NIM_{it} + \beta_5 STAFFX_{it} + \varepsilon_{it} \quad (3)$$

Where, α = constant

i = bank

t = time period

ε_{it} = Error term of bank i on time t

Dependent variable:

PE	=	Profit Efficiency

Independent variables:

GDP	=	gross domestic products
INF	=	inflation
LGROWTH	=	loan growth
IF	=	Impaired Financing
LLP	=	loan loss provision
NIM	=	net interest margin
STAFFX	=	Staff Efficiency

3.6 Data Analysis

This section discusses about the data analysis technique to test the variables. The data analysis software that was used in this research is IBM SPSS Statistics 22, Stata 12 and EVIEWS 9. It was used in diagnostic test and multiple regression analysis. The technique for data analysis for this study is explained in subsections 3.6.1 to 3.6.2.

3.6.1 Diagnostic Test

The quality of data and variables is tested to strengthen the process of generalization of the data. There are five quality tests such as; (1) detecting outliers based on variables involved, (2) multicollinearity test to ensure the correlation between variables by using the tolerance value and variance inflation factor (VIF); (3) normality test to ensure that

the data and variables are distributed normally or not normally; (4) heteroskedasticity test; and (5) auto-correlation test.

3.6.1.1 Detecting Outlier

According to Ben-Gal (2005) cited Hawkins (1980), an outlier is defined as an observation that diverge so much from other observations as to triggered suspicion that was produced by different mechanism. To detect the outlier observations, Mahalanobis distance values is examined and compared to the critical values in Chi-square distribution table (SRE $\pm$ 3.0 and MAH $<$ 26.12 for 8variables).

3.6.1.2 Multicollinearity Check

Hair et al. (2007) defines multicollinearity as the level that effects any variable which can be accounted by other variables. As for Gujarati and Porter (2010) defines multicollinearity as situation whereby there are two or more variables which can be linearly related in a high form. For the purpose of ensuring correlation between variables, the tolerance value and variance inflation factor (VIF) is used. Increase in multicollinearity will raises the complexity of explanation affecting different variables'. In this study, Variance Inflation Factor (VIF) is used to examine the existence of multicollinearity issue among the variables of the study. Sekaran (2003), agrees that Pearson correlation matrix is the most suitable to be used in highlighting the relationship between variables.

3.6.1.3 Normality Test

Normality test is run in order to ensure that the data and variables are distributed normally or not normally. According to Pallant (2010), he suggested that Skewness and Kurtosis is confirmed to be employed as assumption of normality test.

3.6.1.4 Heteroscedasticity Test

Hair, *et al* (2007) suggested that Heteroscedasticity problem exist when the variance is unequal. On the other hand, Gujarati and Porter (2010) refer heteroscedasticity as unequal variance.

3.6.1.5 Auto-correlation Test

According to Chen (2016), autocorrelation is referred to a standardized residual vector as well as normalized spatial weight matrix. However, from the perspective of Gujarati and Porter (2010), autocorrelation is defined as a correlation between members of series of observations ordered in time for time series data or space for cross sectional data.

3.6.2 Fixed Effect Model (FEM)

In this study, the fixed effect model (FEM) will be applied in multiple regression in examining the relationship between the variables involved. Basically, the fixed effect model is the most suitable model to be applied for single sampling country. Since, the sample size of this research is on the local Islamic banks in Malaysia. From the point of view of Reyna (2007), it is sated that, fixed effect model is suitable in examining and determining within single entity such as individual, company or country. Furthermore, according to Batlagi (2000), fixed effect model relevant to be employed

in study of specific organization. This is supported by Gelman (2004), whereby it is mentioned that fixed effect model is constant across the individual.

There are numerous studies on determining profitability in single country employed fixed effect model such as Aziz (2017), Hussain, Affandi and Shukur (2015) and Abduh and Idrees (2013) who applied in the study regards to Malaysian banking. This is supported by Aslam, Inamullah and Ismail (2016) in the Pakistan banking sector, Gunes (2014), the study was made upon the Turkey banking sector and Obamuyi (2013) in Nigeria's banks. Hence, based on previous studies as reference, this study also employs fixed effect model.

3.6.3 Multiple Regression Analysis

A multiple regression analysis is used to conduct an evaluation of dependent variable towards the values of the independent variables. This is done for the purpose of expressing the amount of clarification of the dependent variable depending on the selected independent variables. In order for an assurance of a better explanation of dependent variable, all units are encountered (Shyti et al., 2016). This research uses multiple regressions for the purpose of proving the hypotheses and the control variable. This test helps the researcher to achieve the objectives of this study in determining the factor affecting the profit efficiency.

3.7 Chapter Summary

This chapter discusses the research framework, hypotheses development, research design, operational definition of variables and its measurement, data collection and data analysis technique. The data to be used in this research is gained from annual

reports of the Islamic banks in Malaysia which are derived from Fitch Connect database. The period of the study is 5 years from 2012 to 2016. The independent variables consist of two external factors (GDP and INF) and five internal factors (IF, LGROW, LLP, NIM & STAFFX). The dependent variable is Profit Efficiency -Net Income. Seven (7) hypotheses were developed to investigate the impact of the variables towards profit efficiency in order to answer research questions One (1) and Two (2). The method used is Fixed Effect model.

Chapter Four

Results and Discussion

4.0 Introduction

This chapter discusses the results of this study. The sequence of discussion of this chapter started with descriptive statistics of the studied variables in Section 4.1. It followed by detecting outliers, multicollinearity check, analyses of normality heteroskedasticity test, auto-correlation and panel data analysis in Section 4.2 to 4.4. Subsequently, the results of the analysis inclusive of multiple regression test of the direct relationship between profit efficiency (net income) and the external and internal variables are presented and discussed in Section 4.5 to 4.6 respectively. Finally, 4.7 is on the chapter summary.

4.1 Descriptive Statistics of Variables

A basic feature of the data in this study is described by the descriptive statistics. The aim of these statistics is in order to summarize the data set, rather than being used to test the hypotheses. Table 4.1 presents the descriptive result of the variables for Malaysian Islamic banks used in this study.

Table 4.1 *Descriptive Statistics of Variables for Islamic Banks in Malaysia.*

Variables	Mean	Std. Deviation	N
Profit Efficiency	0.077248	0.0446937	80
Inflation	0.3373	0.09248	80
GDP	0.7030	0.05326	80
Impaired Financing	2.0800	2.37914	80
Loan Loss Provision	2.0359	1.63580	80
Net Interest Margin	2.8508	1.24721	80
Loan Growth	15.5521	21.17590	80
Staff Efficiency	0.2036	0.17064	80

Table 4.1 shows the descriptive statistics of the dependent variables and the independent variables of Malaysian Islamic banks used in this study. The dependent variable is profit efficiency measures using net income (NI), the independent variables are impaired financing (IF), loan loss provision (LLP), net interest margin (NIM), loan growth (LGROW), staff efficiency (STAFFX), gross domestic product (GDP) and inflation (INF). The result indicated that the mean for profit efficiency for 80 observation for Malaysian Islamic banks over the study period is 0.077248. The standard deviation of 0.0446937 also shows that net income level of Islamic banks in

Malaysia. The mean value for IF is 2.0800 which indicate that during the study period, IF for Malaysia had standard deviation of 2.37914.

Table 4.1 also shows the mean value for LLP is 2.0359 while the standard deviation is 1.63580. As for the NIM, the Islamic banks of Malaysia had their mean of 2.8508 and the standard deviation is at 1.24721. Meanwhile, the mean value for LGROW is 15.5521 which is indicates that financing activities of Islamic banks in Malaysia experienced growth 0f 15.55 percent. While the standard deviation is at 21.17590. The mean value for STAFFX is 0.2036; this indicates that most of the Islamic banks staff in Malaysia is contributing 0.20 cent in every dollar of the banks' income during the study period. As for GDP, the mean value is 0.7030 which indicate that during the study period, GDP for Malaysia was at standard deviation of 0.05326. Inflation had mean of 0.3373 for Islamic banks in Malaysia which it is off standard deviation at 0.09248.

4.2 Multicollinearity Check

Variance Inflation Factor (VIF) is used in this study to examine the existence of multicollinearity issue among the variables of the study. VIF values which are above 10 triggers that multicollinearity problem do exist (Hair et al., 2010). The result of the test is presented in the Table 4.2 for Islamic banks of Malaysia

Table 4.2 *Multicollinearity Diagnostic Test for Islamic Banks in Malaysian Variables.*

Variables	**VIF**
Inflation	1.28
Gross Domestic Product	1.28
Loan Loss Provision	9.28
Impaired Financing	8.92
Net Interest Margin	1.45
Staff Efficiency	1.36
Loan Growth	1.14

Referring to Table 4.2, there has been no evidence of multicollinearity problem exists in the model for Malaysia since the variables have VIF less than 10. The highest VIF among the variables is LLP which is 9.28. Further, Pallant (2010) suggested that the correlation matrix should be checked to identify the existence multicollinearity in the model and the correlation matrix of Islamic banks in Malaysia is presented in the Table 4.3.

Based on Table 4.3, the highest correlation coefficient is between LLP and IF, which is 0.9147. However, this value is below 10 whereby it shows no multicollinearity issues.

Table 4.3

Correlation Matrix for Islamic Banks in Malaysia.

	PROFIT	NIM	LLP	LGROW	IF	GDP	INF	STAFFX
PROFIT	1.000000							
NIM	-0.011482	1.000000						
LLP	-0.306775**	0.161707	1.000000					
LGROW	0.151410	.0.094738	-0.238473*	1.000000				
IF	-0.303316**	.-0.054374	0.914735**	-0.207574	1.000000			
GDP	0.024853	0.075996	0.058306	0.043629	-0.022295	1.000000		
INF	-0.101091	-0.104913	-0.137111	-0.106418	-0.118957	0.386516**	1.000000	
STAFFX	-0.417544**	-0.103440	0.457967**	-0.108321	0.506268**	0.020487	-0.027122	1.000000

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

4.3 Normality Test

Normality test is conducted for the purpose to ensure that the data and variables are normally or not normally distributed. The assumption of normality is confirmed by employing the Skewness(± 2.58) and Kurtosis(± 2.58).The Z value are used to further check the normality and calculated by dividing Statistic over Standand Error of Skewness and Kurtosis respectively and compared to a specific critical value. According to Hair et al. (2010), suggested that critical value at± 2.58 (0.01 significant level) and ±1.96 (0.05 significant level) are widely used in the studies. Table 4.4 for Malaysia presented Z value of each of variables in this study.

Table 4.4

Skewness and Kurtosis Test for Islamic Banks in Malaysia.

	Skewness			Kurtosis			
Variables	Statistic	Std. Error	Z Value	Statistic	Std. Error	Z Value	Normal
NI	-0.281	0.269	-1.044	-0.159	0.532	-0.299	√
IF	3.586	0.269	13.331	15.130	0.532	28.440	X
LLP	3.391	0.269	12.606	15.184	0.532	28.541	X
LGROW	2.208	0.269	8.208	5.992	0.532	11.263	X
NIM	3.740	0.269	13.903	23.449	0.532	44.077	X
STAFFX	0.462	0.269	1.717	-1.238	0.532	-2.327	√
GDP	-0.35	0.269	-1.413	-1.165	0.532	-2.190	√
INF	0.701	0.269	2.6	-0.308	0.532	-0.579	√

Note: X = not normal, √ = normal

The sample size of this study for Islamic banks in Malaysia is (N = 80). Hair *et al.* (2010) and Pallant (2010) further defined large sample size when the number of observations is more than 30.

4.4 Diagnostic Test

The result of the heteroscedasticity test, auto-correlation test and penal data test is conducted and the result is presented in the Table 4.4 below:

Table 4.5

Diagnostic Test for Islamic Banks in Malaysia.

Test	**Malaysia (Prob> F)**
Heteroscedasticity Test	0.0000**
Auto-correlation Test	0.2023

Note: *p<0.05, **p<0.01

4.4.1 Heteroscedasticity Test

The result in Table 4.5 shows Malaysian model is found to be significant at p<0.01. The result rejected the null hypothesis and concluded that heteroscedasticity presents in our model of Islamic banks in Malaysia.

4.4.2 Auto-correlation Test

The result of the test presented in Table 4.5 for Islamic banks in Malaysia shows autocorrelation model is found to be not significant at p > 0.01. The result is failed to

reject the null hypothesis and concluded that the data for Islamic banks have no first-order autocorrelations.

4.5 Multiple Regressiou Analysis

The multiple regression analysis is performed using EVIEWS 9 software to determine the projecting influence of independent variables (IF, LLP, LGROW, NIM, STAFFX, GDP and INF) on dependent variable Profit Efficiency. The result of multiple regression analysis for Malaysian banks is presented in the Table 4.6. The beta coefficient value (β) shows the contribution of each independent variable to the dependence variable.

Table 4.6

External and Internal Factors on Profit Efficiency of Islamic Banks in Malaysia.

Variable	Expected signs	Beta Coefficient	*t*-statistics	*p*-value
GDP	+	0.011942	0.439532	0.6619
INF	+	-0.026645	-2.120052	0.0384**
IF	-	-0.002733	-1.284439	0.2042
LGROW	+	0.000020	0.120630	0.9044
LLP	-	0.001068	0.148210	0.8827
NIM	+	0.022444	8.345877	0.0000***
STAFFX	+	-0.176193	-5.411473	0.0000***
R^2	0.804824			
Adjusted R^2	0.729494			
F-Statistics	10.68385			
Sig F-Statistics	0.0000			
N	80			

Note: *p<0.10, **p<0.05, ***p<0.01

Tbe result oftbe multiple regressions for Malaysia is presented in the Table 4.6. The F-statistic that explains the overall significance ofthe model is found to be significant at 0.000 levels with adjusted R-squared of 0.729494. It sbows tbat regression model consisting of IF, LLP, LGROW, NIM, STAFFX, GDP and INF could explain 72.94 percent changes in profit. Further, the predictors from external variables, such as, gross domestic product (GDP) shows insignificant impact while inflation is significant.

Meanwhile there are five predictors from internal variables which are found to be significant that are net interest margin (NIM) and staff efficiency (STAFFX) which are having statistically significant impact on the profit efficiency of Islamic bank in Malaysia and supporting the hypotheses. Other predictors such as, loan growth (LGROW), loan loss provision (LLP) and impaired financing (IF) have no impact on profit efficiency of Islamic bank in Malaysia which is not supporting the hypotheses. Detail of the result is presented in Appendix V.

4.5.1 External Factors for Islamic Banks in Malaysia

The results of these variables are discussed in the following sections.

1) Gross Domestic Product (GDP)

The coefficient estimation of GDP is 0.011942 with t-value of 0.439532 (p> 0.10). This result indicates that 0.011942 points increase in GDP, result in an increase of 1 point in profit efficiency of Islamic banks in Malaysia. The result shows an insignificant relationship whereby both variables are positively related to one another. The result fails to reject null hypothesis H_{01}.

2) Inflation

The coefficient estimation of INF is -0.026645 with t-value of -2.120052 (p <0.10). This result indicates that -0.026645 points decrease in INF, result in an increase of 1 point in profit efficiency of Islamic banks in Malaysia. The result shows a significant relationship whereby both variables are negatively related to one another. The result rejected the null hypothesis H_{02}.

4.5.2 Internal Factors for Islamic Banks in Malaysia

I) Impaired Financing

The coefficient estimation of IF is -0.002733 with t-value of -1.284439 (p> 0.10). This result indicates that -0.002733 points decrease in impaired financing, result in an increase of 1 point in profit efficiency of Islamic banks in Malaysia. The result shows an insignificant relationship. Although the result is not significant, it shows that there is a negative relationship between IF and NI. The result fails to reject null hypothesis H_{03}.

2) Loan Growth

The coefficient estimation of LGROW is 0.00002 with t-value of 0.120630 (p > 0.10). This result indicates that 0.00002 points increase in loan growth, result in an increase of 1 point in profit efficiency of Islamic banks in Malaysia. The result shows an insignificant relationship. However, both variables are positively related. The result fails to reject null hypothesis H_{04}.

3) Loan Loss Provision

The coefficient estimation of LLP is 0.001068 with t-value of 0.120630 (p > 0.10). This result indicates that 0.001068 points increase in loan loss provision, result in an increase of 1 point in profit efficiency of Islamic banks in Malaysia. The result shows an insignificant relationship. However, both variables are positively related to one another. The result fails to reject null hypothesis H_{05}.

4) Net Interest Margin

The coefficient estimation of NIM is 0.022444 with t-value of 8.345877 ($p < 0.10$). This result indicates that 0.022444 points increase in net interest margin, result in an increase of 1 point in profit efficiency of Islamic banks in Malaysia. The result shows a significant relationship whereby both variables are positively related to one another. The result rejected the null hypothesis H_{06}.

5) Staff Efficiency

The coefficient estimation of STAFFX is -0.176193 with t-value of -5.411473 ($p < 0.10$). This result indicates that -0.176193 points decrease in staff efficiency, result in an increase of 1 point in profit efficiency of Islamic banks in Malaysia. The result shows a significant relationship whereby both variables are negatively related to one another. The result rejected null hypothesis H_{07}.

4.5.3 The Summary of the Result of the Relationship between Independent Variables and Profit Efficiency of Islamic Banks in Malaysia

To summarize the results regarding the hypotheses related to the predictive power of external variables and internal variables towards profit of Islamic banks in Malaysia, it can be concluded that the given hypotheses H_{02}, H_{06} and H_{07} are significant. From Section 4.5.1, one(1) external variable is significantly. Meanwhile, 4.5.2 shows two (2) internal variables are significant, influencing profit efficiency of Islamic banks in Malaysia. The summarization of predictor coefficient test regression presented in the Table 4.7.

Table 4.7

Summary of Multiple Regression Result of External and Internal Factors on Profit Efficiency for Islamic Banks in Malaysia.

Independent Variables	**Expected Sign**	**Profit Efficiency**
GDP	**Significant(+)**	Insignificant (+)
Inflation	**Significant(+)**	**Significant(-)**
Impaired Financing	**Significant (-)**	Insignificant (-)
Loan Growth	**Significant(+)**	Insignificant (+)
Loan Loss Provision	**Significant(-)**	Insignificant (+)
Net Interest Margin	**Significant (+)**	**Significant(+)**
Staff Efficiency	**Significant(+)**	**Significant(-)**

4.6 Discussion on the Results

Below is the discussion on the result based on the multiple regression of Islamic banks in Malaysia. 4.6.1 discusses on the result of the external factors while 4.6.2 discusses on the result of internal factors.

4.6.1 Discussion on External Factors

4.6.1.1 Gross Domestic Product (GDP)

The expected result of GDP impact on Islamic banks profit is positive and significant. However, the result from the study shows a positive and insignificant impact of GDP as a predictor of Islamic banks' profit efficiency. The result fails to reject null hypothesis H_{01}. From the study Khasawneh (2016), the studies conducted shows a positively significant relationship between GDP and profitability in the banking sector which is contradict to the result of this study. As stated by Khasawneh (2016), GDP growth have positive impact on profitability of the banks when there is expansionary period. This is because the loan demand will be higher which then more loans will be offered by banks.

4.6.1.2 Inflation

The expected result of inflation impact on Islamic banks profit is positive and significant. The result from the study as well shows a significant but negative impact of inflation as a predictor of Islamic banks' profit efficiency. The result rejected the null hypothesis H_{02}. This shows when the inflation is high, the profit efficiency of Islamic banks in Malaysia will drop from the year 2012 to 2016.This is supported by the study of Sufian and Chong (2008), which the findings show a negative significant correlation between profitability and inflation. It is related is negatively towards the Philippines banks' profitability because inflation is unexpected during the period of study. In fact, the inclination in cost is much more rapid compared to revenue.

4.6.2 Discussion on Internal Factors

4.6.2.1 Impaired Financing

The expected result of impaired financing impact on Islamic banks profit is negative and significant. However, the result from this study shows negative and insignificant impact of impaired financing towards profit efficiency. The result fails to reject null hypothesis H_{03}.This is contradicted from previous studies by and Kaaya & Pastory, (2013) which shows there are negative significant impact between impaired financing and profit efficiency. The finding explains that substantial amount of capital reserve should be maintained by banks in order that credit risk is absorbed during the phase of failure. In fact, lending criteria in banking, credit mitigation techniques and portfolio grading decrease the possibilities of default. This is supported by Căpraru and Ihnatov (2014).

4.6.2.2 Loan Growth

The expected result of loan growth impact on Islamic banks profit is positive and significant. However, the result from this study shows positive and insignificant impact of loan growth towards profit efficiency. The result fails to reject null hypothesis H_{04}. The result shows contradiction between this study and precious studies evidence from Khan et al. (2011), where the result shows that there are positive and significant impact on the profitability of the banks in Pakistan. The study also shows loan growth shows positive significant value at 1 % indicating that the presence of loan growth will rise banks capacity to earn higher in the market. This is also supported by Ana et al. (2011), which result shows a positive significant impact of loan growth towards bank profitability.

4.6.2.3 Loan Loss Provision

The expected result of loan loss provision impact on Islamic banks profit is negative and significant. However, the result was not significant as a predictor of Islamic banks' profit efficiency. The result fails to reject null hypothesis H_{05}. Contradict to previous study by Menicucci and Paolucci (2016), where the result shows a negative and significant impact by loan loss provision towards banks' profitability. The findings from the study shows inclination exposure towards credit risk is related with the decline in profitability. It shows banks with high credit risk leads towards lower profit. The findings also provide suggestion in improving profit is by monitoring and screening credit risk.

4.6.2.4 Net Interest Margin

The expected result of net interest margin impact on Islamic banks profit is positive and significant. The result from the study as well shows a positive and significant impact of net interest margin as a predictor of Islamic banks' profit efficiency. The result rejected the null hypothesis H_{06}. This study result is similar to the study by Khan et al. (2011), where the findings show that net interest margin is positively significant and contributes in the bank profitability. It shows that it is positive at 10% which indicates net interest margin growth increases the bank profitability.

4.6.2.5 Staff Efficiency

The expected result of staff efficiency impact on Islamic banks profit is positive and significant. The result from the study as well shows a significant but negative impact of staff efficiency as a predictor of Islamic banks' profit efficiency. The result rejected the null hypothesis H_{07}. Because it shows a significant impact. However, it is

contradicted to the studies by Athanasoglou *et al.* (2005) which shows there are positive impact towards banks profitability. It is also said that labour productivity leads towards positive impact of banks profitability. Other studies also provided evidence such as high management quality, human capital efficiency also leads towards the increase in profit.

4.7 Chapter Summary

Basically, this chapter summarized on the results which explain on the (1) descriptive statistic of the variable; (2) multicollinearity check; (3) normality test; (4) diagnostic test; (5) heteroscedasticity test; (6) auto-correlation test; (7) multiple regression analysis. Then there is result of the internal and external factors (8); (9) followed by summary of result between independent variables and profit efficiency. Finally, is the discussion on the result (10).

Chapter Five

Conclusion and Recommendation

5.0 Conclusion

This study investigates and analyses the relationship between external and internal factors with profit efficiency in particular of the Islamic banks in Malaysia. The motivation for studying the profit efficiency determinants comes from the inconclusive evidence of the relationship between external and internal factors with profit efficiency of Islamic banks. The importance of the relationship and effect of these factors of the profit efficiency of Islamic banks has been examined in this study. The next section presents a recapitulation of the findings.

5.1 Recapitulation of the Findings

To recapitulate, the findings are presented based on the sequence of the three research objectives as follows:

5.1.1 Objective 1

To examine the influence of external factors which are Gross Domestic Product (GDP) and inflation on the profit efficiency of the Islamic Banks in Malaysia. The result is presented in Table 4.6.

The coefficient result of GDP is positively and insignificantly related to profit efficiency of Islamic banks in Malaysia. The result indicated that GDP is an insignificant determinant and has no influence in contributing to profit efficiency for

Islamic banks in Malaysia from the period 2012 to 2016. Meanwhile, for coefficient result of inflation, it shows negative and significant relationship towards profit efficiency of Islamic Banks in Malaysia. This shows when the inflation is high, the profit efficiency of Islamic banks in Malaysia will drop from the year 2012 to 2016.

Hence, from the external factors affecting the profit efficiency of Islamic banks in Malaysia, it shows that inflation (INF) contributes to the profit efficiency as it provides a negatively significant result towards profit efficiency of Islamic Bank in Malaysia covering period 2012 to 2016. On the other hand, GDP is an insignificant determinant and has no influence in contributing to profit efficiency for Islamic banks in Malaysia from the period 2012 to 2016.

5.1.2 Objective Two

To investigate the impact of internal factors which are loan grows, impaired financing, loan loss provision, net interest margin and staff efficiency on the profit efficiency of the Islamic Banks in Malaysia. The result is presented in Table 4.6.

The regression analysis reveals that the coefficient result of loan growth (LGROW) is positively and insignificantly related to profit efficiency of Islamic banks in Malaysia. The result indicated that LGROW is an insignificant determinant and has no influence in contributing to profit efficiency for Islamic banks in Malaysia from the period 2012 to 2016.

As for impaired financing, the expected coefficient result was negatively and significantly related to profit efficiency of Islamic banks in Malaysia. The actual result

revealed that, impaired financing for the period from 2012 to 2016 is negative and insignificant. Based on the result, it shows LGROW has no influence in contributing to profit efficiency for Islamic banks in Malaysia from the period 2012 to 2016. Meanwhile, loan loss provision regression analysis result shows its positive and insignificant whereby the LLP increases but does not contributes to the profit efficiency ofIslamic banks in Malaysia from the year 2012 to 2016.

Next is net interest margin. The regression analysis reveals that the coefficient result for NIM is equivalent to the expected result which is positively and significantly related to Islamic banks profit efficiency from year 2012 to 2016. One of the reason why NIM is high is due to banks which are well capitalized. This will lead the banks to be more profitable. Hence, it shows that NIM do contribute to the profit efficiency of Islamic banks in Malaysia. Nevertheless, is staff efficiency. The coefficient result of staff efficiency is negative and insignificant towards the profit efficiency ofIslamic banks profit efficiency in Malaysia. It is contradicted to previous studies which proclaim that high management quality, labour productivity, human capital efficiency would lead positively towards a higher performance Islamic banks in Malaysia. Yet, it shows a significant relationship between staff efficiency and profit efficiency of Islamic banks in Malaysia.

Hence, from the internal factors affecting the profit efficiency of Islamic banks in Malaysia, it shows that net interest margin (NIM) and staff efficiency (STAFFX) contributes to the profit efficiency as it provides a positive and significant and negative and significant result respectively towards profit efficiency of Islamic Bank in Malaysia covering period 2012 to 2016. On the other hand, LGROW, IF and LLP is

an insignificant determinant and has no influence in contributing to profit efficiency for Islamic banks in Malaysia from the period 2012 to 2016.

5.2 Contribution and Implication of the Study

The findings of this study contribute new information to the body of knowledge in terms of theoretical and empirical contribution. The contributions are presented as follows and followed by policy implication.

5.2.1 Theoretical Contribution

The conceptual contributions of this study are extract from the reviews of the literature and the findings of the analyses. There are many literatures which have addressed the issue of bank performance, profitability of banks and profit efficiency by using Financial Intermediation Theory and Agency Theory. Basically, intermediation theory is utilized in banking sector in cases of transferring non-liquid asset into liquid asset, transforming the short-term assets into long term assets and for cases of smaller assets are converted into assets with a big propotions. This theory contributes to banking sector by banks being the intermediaries for investors, borrowers and etc.

As for agency theory it is related with principals and agents or managers and owners conflict of interest. It also provides on assumptions on agency problems. Besides, this agency theory also manages to contribute to banking sector through presence of profit efficiency which is one of the component of agency theory as supported by Berger and Patti (2003). Profit efficiency is said to be suitable measure in testing agency cost theory as it has authority upon the local market price effect and other external factors. This is also because it offers a rational standard for each organisation's performance

when there is minimization in agency cost. Besides, profit efficiency is better than cost efficiency in assessing the performance of managers. This is because it is appropriate to analyse how well managers raise the firm's revenues besides controlling costs.

5.2.2 Empirical Contributions (New Findings)

This study extends the contributions of previous studies on profit efficiency of Islamic banks by furnishing new evidence on profit efficiency of Islamic banks in Malaysia. The new evidence is that the external factors such as GDP are not the dominant factors influencing profit efficiency of Islamic banks in Malaysia. This result proved that Islamic banks were affected by the macro-economic factor which inflation negative and significantly. In contrast to the finding of previous studies which found that macro-economic factor which is GDP influenced profit efficiency of banks positive and significantly as shown in the studies of (Khasawneh, 2016), (Bashir, 2003), (Obamuyi, 2013), (Francis, 2013) and (Gui et al., 2011).

This study also examined factor which is net interest margin (NIM) as predictors of profit efficiency rather than as dependent variables as being done in the past studies such as Kohler (2012) and San and Heng (2013). The significant impact of NIM on profit efficiency provides fresh findings to Islamic bank management. The switching role of NIM as independent variables rather than dependent variables provide new dimensions in understanding in depth on profit efficiency of Islamic banks as shown by this study. In addition, staff efficiency also is tested as a new variable to show its impact and relationship towards the profit efficiency of Islamic banks in Malaysia. It is because there is lack of studies which formerly tested staff efficiency on the profit efficiency of Islamic banks in Malaysia

5.3 Limitation of the Study

There are some limitations pertaining to this study that needs to be considered. First, this study only examined Islamic banks in Malaysia. Thus, the result of this study is limited to profit efficiency ofIslamic banks in these regions and do not represent the profit efficiency of the Islamic banks in other parts of the world. Second, the results established are limited to published accounts for 2012 – 2016 study periods only. Thirdly, is limitation on finding of new variables. As for net interest margin and staff efficiency is quite new to the studies, there are limited findings which precisely focus on the profit efficiency of Islamic banks in Malaysia.

5.4 Suggestion for Future Research

Pursuant to the present study, several inputs for future research to be undertaken are suggested as follows:

Firstly, it is suggested that more research need to be conducted to identify the determinants of profit efficiency ofIslamic banks due to very limited empirical studies which can be found. The topics should not be limited to several macroeconomic and banks specific factors only but also need to be diversified and needs to test new variables in order to make betterment to the existing studies.

Second, more studies on profitability and profit efficiency should be encountered not focusing on one country or region only. Perhaps, it is suggested to make comparative study on Islamic banks profit worldwide. This would help in obtaining more comprehensive analysis of the profit efficiency of Islamic banks.

Lastly, it is suggested that, there should be up-to-date studies covering the latest range of time which focuses on the Islamic banks profit efficiency.

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APPENDIX 1 -List of Islamic Banks in Malaysia

No.	Islamic Banks in Malaysia
1.	Affin Islamic Bank Berhad
2.	Al Rajhi Banking & Investment Corporation (Malaysia) Berhad
3.	Alliance Islamic Bank Berhad
4.	AmBank Islamic Berhad
5.	Asian Finance Bank Berhad
6.	Bank Islam Malaysia Berhad
7.	Bank Muamalat Malaysia Berhad
8.	CIMB Islamic Bank Berhad
9.	HSBC Amanah Malaysia Berhad
10.	Hong Leong Islamic Bank Berhad
11.	Kuwait Finance House (Malaysia) Berhad
12.	Maybank Islamic Berhad
13.	OCBC Al-Amin Bank Berhad
14.	Public Islamic Bank Berhad
15.	RHB Islamic Bank Berhad
16.	Standard Chartered Saadiq Berhad

APPENDIX II – Data Profit (Net Income) of Islamic Banks in Malaysia

	2012	2013	2014	2015	2016
BIMB	0.1	0.1	0.07	0.06	0.06
BMMB	0.05	-0.02	0.09	0.05	0.07
RHB ISLAMIC	0.09	0.08	0.1	0.1	0.11
CIMB ISLAMIC	0.18	0.14	0.13	0.12	0.14
MAYBANK ISLAMIC	0.1	0.08	0.08	0.01	0
KFH	0.04	0.06	0.05	-0.02	-0.02
AFFIN ISLAMIC	0.11	0.08	0.09	0.09	0.1
AM ISLAMIC	0.13	0.12	0.04	0.08	0.09
ALLIANCE ISLAMIC	0.14	0.07	0.06	0.06	0.04
HONG LEONG ISLAMIC	0.07	0.14	0.11	0.09	0.11
PUBLIC ISLAMIC	0.02	0.05	0.01	0.11	0.11
ASIAN FINANCE ISLAMIC	-0.02	0.02	0.03	0	0.01
AL RAJHI	0.08	0.08	0.08	0.08	0.07
OCBCAL AMIN	0.1	0.18	0.09	0.14	0.13
STANDARD SHART ISLAMIC	0.1	0.09	0.02	0.03	0.05
HSBC AMANAH	0.13	0.12	0.11	0.08	0.05

APPENDIX III- Diagnostic Test Result for Islamic Banks in Malaysia

- xttest3

Modified Wald test for groupwise heteroskedasticity in fixed effect regression model

H0: sigma(i)^2 = sigma^2 foralli

chi2(16) = 1574.68

Prob>chi2 = 0.0000

- xtserial NI IF LLP NIM LGROW STAFFX GDP INF

Wooldridge test for autocorrelation in panel data

H0: no first-order autocorrelation

F(1, 15) = 1.778

Prob> F = 0.2023

APPENDIX IV- Correlation Matrix

Correlations

		NI	NIM	LLP	LGROW	IF	GDP	INF	STAFFX
NI	Pearson Correlation	1	-.011	-.307**	.151	-.303*	.025	-.101	-.418**
	Sig. (2-tailed)		.919	.006	.180	.006	.827	.372	.000
	N	80	80	80	80	80	80	80	80
NIM	Pearson Correlation	-.011	1	.162	.095	-.054	.076	-.105	-.103
	Sig. (2-tailed)	.919		.152	.403	.632	.503	.354	.361
	N	80	80	80	80	80	80	80	80
LLP	Pearson Correlation	-.307**	.162	1	-.238*	.915**	.058	-.137	.458**
	Sig. (2-tailed)	.006	.152		.033	.000	.607	.225	.000
	N	80	80	80	80	80	80	80	80
LGROW	Pearson Correlation	.151	.095	-.238*	1	-.208	.044	-.106	-.108
	Sig. (2-tailed)	.180	.403	.033		.065	.701	.347	.339
	N	80	80	80	80	80	80	80	80
IF	Pearson Correlation	-.303**	-.054	.915**	-.208	1	-.022	-.119	.506**
	Sig. (2-tailed)	.006	.632	.000	.065		.844	.293	.000
	N	80	80	80	80	80	80	80	80
GDP	Pearson Correlation	.025	.076	.058	.044	-.022	1	.387**	.020
	Sig. (2-tailed)	.827	.503	.607	.701	.844		.000	.857
	N	80	80	80	80	80	80	80	80
INF	Pearson Correlation	-.101	-.105	-.137	-.106	-.119	.387**	1	-.027
	Sig. (2-tailed)	.372	.354	.225	.347	.293	.000		.811
	N	80	80	80	80	80	80	80	80
STAFFX	Pearson Correlation	-.418**	-.103	.458**	-.108	.506*	.020	-.027	1
	Sig. (2-tailed)	.000	.361	.000	.339	.000	.857	.811	
	N	80	80	80	80	80	80	80	80

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

APPENDIX V -Results of the Multiple Regressions for Islamic Banks in Malaysia

Dependent Variable: NI
Method: Panel EGLS (Cross-section weights)
Date: 04/05/18 Time: 18:07
Sample: 2012 2016
Periods included: 5
Cross-sections included: 16
Total panel (balanced) observations: 80
Linear estimation after one-step weighting matrix
White cross-section standard errors & covariance (d.f. corrected)
WARNING: estimated coefficient covariance matrix is of reduced rank

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.052871	0.010209	5.178934	0.0000
IF	-0.002733	0.002127	-1.284439	0.2042
LGROW	2.40E-05	0.000199	0.120630	0.9044
LLP	0.001068	0.007204	0.148210	0.8827
NIM	0.022444	0.002689	8.345877	0.0000
STAFFX	-0.176193	0.032559	-5.411473	0.0000
GDP	0.011942	0.027169	0.439532	0.6619
INF	-0.026645	0.012568	-2.120052	0.0384

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

R-squared	0.804824	Mean dependent var	0.130583
Adjusted R-squared	0.729494	S.D.dependentvar	0.112834
S.E. of regression	0.030503	Sum squared resid	0.053034
F-statistic	10.68385	Durbin-Watson stat	2.003243
Prob(F-statistic)	0.000000		

Unweighted Statistics

R-squared	0.616712	Mean dependent var	0.077248
Sum squared resid	0.060485	Durbin-Watson stat	1.858552